



PHD

Turning nature into essays

the epistemological and poetic function of the nature essay

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Award date:
2017

Awarding institution:
University of Bath

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Turning Nature into Essays:
The Epistemological and Poetic Function of the Nature Essay

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A thesis submitted for the degree of Doctor of Philosophy

University of Bath

Department of Politics, Languages and International Studies

November 2016

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Table of Contents

Acknowledgements

Abstract

Introduction.....	1
 1. The Nature Essay and Genre.....	 14
1.1 Aspects of the Essay: Characteristics of Form and Function.....	14
1.2 Ways of Knowing and Making Sense of Nature	26
 2. “The Butterfly Collector”: The Encyclopaedic-Scientific Episteme	 40
2.1 Aesthetics of Collecting and Connecting in Alexander von Humboldt’s <i>Ideen zu einer Physiognomie der Gewächse</i> and Ernst Jünger’s <i>Subtile Jagden</i>	 40
2.2 Measuring and Mapping Nature in the Nineteenth Century: Henry David Thoreau’s <i>Walden</i> , Alexander von Humboldt’s <i>Über die Steppen und Wüsten</i> , and Domingo Faustino Sarmiento’s <i>Facundo</i>	 65
2.3 Data Prose – Contemporary Nature Essay Writing: Eliot Weinberger’s <i>Naked Mole-Rats</i> , David Foster Wallace’s <i>Consider the Lobster</i> and Andreas Martin Widmann’s <i>Mind Gardens</i>	 94
 3. “Mother Nature’s Son”: The Metaphysical-Spiritual Episteme.....	 115
3.1 Epiphanic Moments and Revelations: J. A. Baker’s <i>The Peregrine</i> and Kathleen Jamie’s <i>Peregrines, Ospreys, Cranes</i>	 115

3.2 The Dying Animal: Unsettling Human-Insect Relations through Elegy and Irony in Virginia Woolf's <i>The Death of the Moth</i> and Robert Musil's <i>Das Fliegenpapier</i>	139
3.3 Tales of Transformation and Experience: Thoreau's <i>Walden</i> and Andreas Maier and Christine Büchner's <i>Bullau. Versuch über Natur</i>	154
4. "Animal Farm": The Ethical Episteme – Animal Ethics, Stories of Decay, and Writing Entangled Agencies	178
Conclusion: Paradigm Shifts in the Nature Essay	202

Bibliography

Acknowledgements

This dissertation began life in a course on the genre of the essay at the University of Mainz and has since crossed the channel. At the University of Bath it was continued and completed with the help of a series of supervision sessions over the course of approximately three years. While my thanks go to Dieter Lamping for providing valuable advice during my time in Mainz, the research environment in England could not have been more supportive to the further development of this project and that is in great part owing to Axel Goodbody, Nina Parish, and Richard Kerridge as literary scholars and individuals. I could not have done it without their expertise, encouragement and engaging criticism for which I am truly grateful.

Funding for this research project was generously provided by the German Heinrich Böll foundation, while a Graduate School Scholarship of the University of Bath took away the burden of having to pay English tuition fees. Again, I would like to thank my lead-supervisor, Axel Goodbody, for encouraging me to apply for funding and supporting me in every other possible matter. I am thankful for the privilege of having had three years at my disposal, in which I could focus mainly on my research. In this context, I should also like to thank my parents, Eva and Thomas Schröder, for their ongoing support, and likewise Jutta and Werner Widmann. Without a second base in the Rhine-Main area it would have been much more difficult to realise a PhD project that profited immensely from movements between the UK and the European continent. The fact that I was being allowed into the reading rooms of the British Library, the Senate House Library, and University College London Library, in addition to the research facilities in Bath, while still having University of Mainz's library at my disposal, generated a vibrant working environment.

During my time as a PhD student, I have also profited from the opportunities to present my research at conferences and summer schools. Among them the 2013 Summer School of the Austrian Institut für Kulturwissenschaft (IFK) that was so kind as to invite me as a stipendiary; the 2014 Würzburg Summer School for Cultural and Literary Animal Studies; the 2014 conference on ecological genres of the DFG-Netzwerk “Ethik und Ästhetik in literarischen Repräsentationen ökologischer Transformationen” at the University of Bayreuth; the 2015 ASLE conference at the University of Idaho; the 2015 ASLE-UKI conference at Murray Edwards College, University of Cambridge; and the 2016 Congress of the Humanities and Social Sciences at the University of Calgary. Each of these gatherings provided me with valuable feedback and brought me into contact with other ecocritics and fellow literary scholars, some of which have now become friends. My thanks go to Alan Macpherson for reading a draft version of my chapter on J. A. Baker and Kathleen Jamie and to Benjamin Bühler and Dan Gorenstein for sharing their research on Ernst Jünger’s entomological writing with me.

Both academic contexts, German and English, have inspired this book, but there are also traces in this thesis of many private conversations, more than I can count. Talking with others about the nature essay, but also about literature in general and the place and meaning it can hold in one’s life encouraged me to pursue this research project in comparative literature. I should like to mention my conversations – some more recent than others – with Hannes Becker, Katharina Dorn, Judith Keller, Mary Kuhn, Jyl Millard, Jochen Raue, Denise Reimann, Kristina Sturm, Christiane Stutius-Ott, Ulrike Weymann, but most importantly with Martin Widmann who was during this project effectively a fourth supervisor, the best proof reader I can think of and, as always, much more than that.

Abstract

The topic of this doctoral thesis is the nature essay: a literary form that became widely used in European literature around 1800 and continues to flourish in times of ecological crisis. Blending natural history discourse, essayistic thought patterns, personal anecdotes, and lyrical descriptions, nature essays are hybrid texts. Their authors have often been writers with a background in science. As interdiscursive agents they move swiftly between different knowledge formations. This equips them with a unique potential in the context of ecology. Essayistic narrators can grasp the interdisciplinary character of environmental issues because they have the ability to combine different types of knowledge. They can be encyclopaedic fact mongers, metaphysical ramblers and ethical counsellors. More often than not they are all of these in one person.

Where nature essays have been taken into consideration so far they have mostly been discussed together with other nature-oriented nonfiction forms under the label 'nature writing'. This study proposes a different approach in that it insists that the nature essay has to be understood as a literary form in its own right. It explores canonical works of nature writing, such as Henry David Thoreau's *Walden*, often for the first time as nature essays by discussing them alongside other typical examples of this genre tradition.

In order to better understand the discursive impact of this form, I frame my discussion in the context of ecocritical theory. This means that I analyse my corpus of texts with regard to the ways in which writers depict the relationships between human and nonhuman spheres. Putting a particular focus on Germanic and Anglophone literature, this thesis investigates central paradigms in the evolution of nature essay writing. It covers a time period that stretches from its roots in late eighteenth-century natural history discourse to the present, identifying key epistemological, formal, and thematic patterns of this literary form, the importance of which so far has been rather neglected by literary criticism.

Introduction

Why the Nature Essay?

This thesis is about the nature essay – a type of literary writing that is defined both by formal characteristics of the essay genre and its discursive engagement with a particular subject matter. As frequently with definitions, this one inevitably is in dialogue with other definitions. When scholars and writers refer to the ‘literary essay’ they usually mean a written discourse in prose, typically but not always short enough to be read at one sitting, produced by a persona of the author rather than a fictional speaker, on a theme for which the interest of a common reader is sought. This theme is approached on the basis of subjective experiences, using rhetorical and poetic means (Schlaffer, 1997, p. 522). Since Michel de Montaigne published the first book of his *Essais* in 1580 and thereby founded a new genre tradition,¹ the idea of nature has been a persistent concern of essayists. In most cases, they use the word ‘nature’ as an umbrella term for the non-human or the non-artificial world, as opposed to a broader understanding in which ‘nature’ denotes “the sum total of the structures, substances and causal powers that are the universe” (Clark, 2011, p. 6). But concepts of nature vary across cultures and over time (cf. Soper, 1995). Hartmut Böhme describes it as a “relational term” (2002, p. 433), because its meaning exists only in relation to a particular speaker or thinker. In the literary essay this is usually the essayistic subject, who is characterised by her or his ability for reflection, thereby enhancing a notion of the self that defines itself through its relation to other crea-

¹ Together with Sir Francis Bacon, Montaigne is often considered to be a founding figure in the history of the essay genre (cf. Macé, 2006, p. 12). Although he published his *Essais* under the title that would later become the genre designation, Montaigne did not use the word ‘essay’ to indicate a genre context yet (see Chadbourne, 1997, p. 569; Schlaffer, 1997, p. 522; Pfammatter, 2002, p. 7). Bacon was the first to do so. His *Essays* (1597) helped to establish the essay as a proper genre by introducing the term into the English-speaking world, where the genre quickly began to flourish.

tures and things and is therefore permanently aware of borders. While it is clear that in the age of the Anthropocene, in which all parts of the planet bear traces of our human presence,² nature-culture dichotomies are untenable, nonhuman agencies remain in play. Distinctions between human and non-human entities continue to be central to essayistic argumentation. The imagination of boundaries is a vital part of essayistic discourse. It is, after all, nature as an externality which attracts many essayistic speaker subjects. Instead of prescribing a specific nature concept, I therefore propose to look into the ways in which essays envision local and global environments, as writers turn the essay into a vehicle for their contemplation of natural spheres, which they find outside, but sometimes even within the human body.

As a form the nature essay started to emerge widely in European literature around 1800, when the empirical grasp of natural history fused with the subjective take of the essay. More than two hundred years later, it continues to thrive in times of environmental crisis and green consciousness. Turning towards individual animal and plant species, landscapes, but also large-scale phenomena like the climate or deforestation, nature essays cover a rich terrain of nature topics and come in many shapes. They can range from ultra-short, one sentence pieces like Eliot Weinberger's *The Sabara* – which in its totality reads: “Camels’ feet leave lotus-pad prints in the sand.” (2007, chap. 33) – to complex book-length essay-cycles like Henry David Thoreau's *Walden* (1854), which describes an experiment in alternative living in an attempt to restore harmony with nature. Amid all this variety in theme and style lies a genre tradition of resisting preconceived orders, of fostering unconventional perspectives and seeking truth in the realm where personal experience, aesthetic vision, ethical questions, and scientific facts intersect. Instead of constraining themselves to one field of knowledge, essayists branch out into multiple directions. Theodor Adorno, therefore, compared the design of the essay to a carpet, because it “does not progress in a single direction; instead, the moments are interwoven as in a carpet. The fruitfulness of the thoughts depends on the density of the texture” (1991, p. 13). Essays use language to generate new meanings and cross disciplinary boundaries as they blend poetry and facts. This epistemological openness generates a unique capacity to grasp the complex entanglement in which the human species currently inhabits this

² According to atmospheric chemist Paul J. Crutzen, the Anthropocene is the era that superseded the epoch of the Holocene when humans became the major geological and climactic force on our planet, shaping the climate and the global ecosystem (cf. Crutzen, Stoermer, 2000). Bill McKibben argues similarly in *The End of Nature* (1989) that no place on earth remains unaffected by industrial civilization.

planet. In his introduction to the field, *The Cambridge Introduction to Literature and the Environment* (2011), the British scholar Timothy Clark concludes that “the essay form suits the often perplexingly interdisciplinary nature of environmental issues.” (p. 36) In the present study, I take Clark’s argument a step further by exploring the nexus of different epistemological and aesthetic strategies that constitute the essayistic discourse on nature. Coming from essay theory allows for a better understanding of what turns the essay into a particularly effective textual laboratory for ecological issues.

Take the short essay *Wasps* (1905) by the British-Argentinian author and naturalist W.H. Hudson as an example. Hudson’s text begins, like many nature essays, with a walk, proving that essays frequently take their point of departure in immediate experience rather than some abstract axiom. We find the first-person narrator pausing “in a Surrey orchard to watch a curious scene in insect life” (1998, p. 278). It is September and the essayistic speaker subject zooms in on an over-ripe pear on the ground, from which a bunch of “wasps had eaten a deep cup-shaped cavity” (ibid.). Watching the wasps simultaneously feeding on and defending the pear against other insects, the narrator contemplates the interplay between instinct, intelligence and temper:

The wasp certainly has a waspish disposition, a quick resentment, and is most spiteful and tyrannical towards other inoffensive insects. He is a slayer and devourer of them, too, as well as a feeder with them on nectar and sweet juices [...]. (Ibid., p. 279)

Zooming out of the place-based scene that opened the essay, Hudson’s narrator interprets the wasps’ behaviour in an anthropomorphising way, as he uses metaphors and adjectives like “slayer” and “spiteful” to characterize them. His initial aesthetic attraction to the wasps’ beautiful bodies, which appear “enamelled in colours” (ibid.), clashes with his framing of their behaviour as extraordinarily violent:

It was when I began to find out the ways of wasps with other insects on which they nourish their young that my pleasure in them became mixed with pain. For they did not, like spiders, ants, dragon-flies, tiger-beetles, and other rapacious kinds, kill their prey at once, but paralysed it by stinging its nerve centres to make it incapable of resistance, and stored it in a closed cell, so that the grub to be hatched by and by should have fresh meat to feed on – not fresh-killed but live meat. (Ibid.)

Wasps delivers its insect description with a twofold underpinning: the aesthetic discourse on beauty intersects with the moral discourse on violence. Hudson’s essayistic subject struggles with the amorality he witnesses in nature, an amorality that contradicts his “idea of a beneficent Being who designed it all” (ibid., p. 279). Yet, the no-

tion of extreme violence in itself is a highly normative cultural construct, fostered by texts like this one. Contrary to human interpretation of animal behaviour, wasps in themselves are, as far as we know, not deliberately violent. They act according to a natural design that was beneficial to the survival of their species. This insight sits uneasily with a pre-Darwinian philosophy of life, as the essayistic subject admits. But, over the course of the essay we observe a change of mind. Darwinist theory enters the essay in the form of a micro-narrative: towards the end of the text, an elder brother “put[s] a copy of the famous *Origin of Species*” (ibid., p. 280) in the narrator’s hands. The reference to Darwin adds a further layer of meaning and provides a counter-framing to Hudson’s personal reflections, by embedding them in a more universal theoretical context. The essayistic narrator admits that Darwin’s theory of the laws of variation and the survival of the fittest counters descriptions of “*diabolical*” (ibid., p. 281, Hudson’s emphasis) behaviour often included in writing on natural history topics, without diminishing the sense of cruelty. In turning towards Darwin, Hudson counters his own depiction of “spiteful” wasps in a move that is self-reflexive as well as dialogic.

Wasps is a typical nature essay in several respects which I will develop in greater detail later, but which should be mentioned here, right at the beginning. It is, first of all, the absence of any major narratives that turns the essay into an apt genre vehicle to discuss ecological phenomena, because the lack of any explicitly fictional characters or plot arcs opens up textual space for extensive descriptions and contemplations of ecological processes. Secondly, the essay’s capacity to recreate subject-based thought processes allows the essayist to showcase how an opinion about a topic, such as wasps, comes into existence rather than just presenting a ready-made attitude. Essays dramatize the formation of thought. They embody ideas, making them less abstract in the process. Thirdly, the essay’s interdiscursivity enables the writer to amalgamate different kinds of knowledge and popularise expert theories by turning scientific facts into literature. Fourthly, the essay’s ability to perform sudden shifts in style, scale, and focus enables a unique holistic take on ecology. While Hudson’s essay alternates between descriptions that are specifically localised in Surrey and universal contemplations on wasp-behaviour, other essays shift the focus to much broader spaces, taking in the whole planet at times, as in Alexander von Humboldt’s *Ansichten der Natur* (*Views of Nature*, 1808). Binding together local observations and universal contexts, essays – like novels and films – have the ability to be microscopic

and macroscopic within one piece of writing. They can zoom in on a nature experience, which they evoke as an intense interior phenomenon, and in the next moment become a type of camera eye that takes in a landscape, a plant or, as in Hudson's case, even a tiny insect through the mode of external description, only to swiftly zoom out again as the essayistic speaker reflects on the universal laws of nature. This ability to combine descriptions of localised environments with non-localised phenomena is, according to Ursula Heise's *Sense of Place and Sense of Planet* (2008), crucial in times of large-scale ecological crises. My research therefore aims to demonstrate that their genre design allows nature essays to achieve this peculiar 'ecocosmopolitan' grasp – to use Heise's vocabulary – of the environment.

Nature Writing Revisited: Method and Scope

My discussion of the nature essay is twofold: on the one hand, I rely on essay theory to explain the genre outline of the nature essay; on the other, I draw on and aim to contribute to ecocritical research. Framing my discussion of the nature essay through ecocriticism – the attempt to “bring environmental considerations into the discourse of literary criticism and theory” (Glotfelty, 2014, p. x) – allows me to raise extended questions about the ways in which nature essays shape our understanding of the natural world. Many important nonfictional arguments about nature, such as Ralph Waldo Emerson's famous *Nature*; Johann Wolfgang von Goethe's *Über den Granit* (*On the Subject of Granite*, 1784), an essay that in less than a dozen pages describes the texture of granite, combining historical reflections and geological descriptions with a hymnal praise of God's creation; Alexander von Humboldt's *Ansichten der Natur*, Henry David Thoreau's *Walden*, Virginia Woolf's *The Death of the Moth* and Aldo Leopold's *The Land Ethic*, which will all be discussed later, are essays or essay cycles, but they have rarely been addressed as such.³

³ The only book-length works that deliberately combine nature-theme and essay genre in their analysis are two so far unpublished doctoral dissertations: Ayli Lapkoff's *A Philosophical Reflection on Nature Writing* (2007) emphasises the link between essay genre tradition and nature writing, while it falls short of providing a more profound discussion of the essay's epistemological capacities. Bertrand Guest's *Écritures révolutionnaires de la nature au XIXème siècle: géographie et liberté dans les essais sur le cosmos d'Alexander von Humboldt, Henry David Thoreau et Elisée Reclus* (2013) particularly focusses on the nexus between scientific practices and political reasoning in nineteenth-century nature essay writing.

Until recently nature essays were more often than not filed under the much more generalizing topical label ‘nature writing’,⁴ to which they make an important contribution – important enough, in fact, as I shall show over the course of this study, for them to be understood as constituting a literary subgenre in their own right. It is the aim of the present study to stake out a new conceptual territory that enables us to reassess the traditional view of nature essays as well as rethinking the multiple contributions they make to environmental discourse. While this thesis is indebted to ecocritical research on nature writing, particularly to Lawrence Buell’s *The Environmental Imagination* (1995), it is noteworthy that few scholars so far have focussed on the genre tradition of the essay itself. The tendency becomes apparent in the lack of index entries for either ‘nature essay’ or ‘essay’ in research within this field. *The Environmental Imagination*, Peter A. Fritzell’s *Nature Writing and America* (1990), and Scott Slovic’s *Seeking Awareness in American Nature Writing* (1992) do not dedicate a section of its own to aspects of the essay, although they sometimes use the term to indicate a genre context (cf. Buell, 1995, pp. 26, 45, 189; Slovic, 1992, pp. 13, 116, 142, 154). And while Thomas J. Lyon’s *This Incomparable Land. A Guide to American Nature Writing* (2001) explicitly mentions Montaigne and the essay tradition in a section entitled *Beginnings* (pp. xi, 35-36; see also Lyon, 1989, p. 3), it does not enlarge upon essay theory. In revisiting nature writing from a genre perspective this study thus intends to fill a gap.

Ecocritical research until the late 1990s focussed, in what Buell describes as the first wave of environmental criticism, on representations of the wild and wilderness in Anglophone nature writing. Most ecocritical conferences still feature panels on nature writing and *ISLE*, *Ecozon@*, *Green Letters*, and other ecocritical journals regularly include articles on nature writing, but, generally, there has been a call to move *Beyond Nature Writing* – as indicated by the title of a 2001 collection of articles, edited by Karla Armbruster and Kathleen R. Wallace (cf. pp. 3-4). So-called second wave ecocriticism takes a broader view of nature literature. It designates the turn towards environmental justice, focussing on the relationships between environmental discourses and gender, race and class issues, but the ‘second wave’ is also about new genre territories (cf. Slovic, 2010, p. 5). Patrick D. Murphy in *Farther Afield in the*

⁴ Scott Slovic, in a much quoted definition, describes nature writing as “literary nonfiction that offers scientific scrutiny of the world (as in the older tradition of literary natural history), explores the private experience of the individual human observer of the world, or reflects upon the political and philosophical implications of the relationships among human beings and between humans and the larger planet”. (2004, p. 888)

Study of Nature-Oriented Literature argues that by focussing mainly on nonfiction and on Anglophone literatures, ecocritics have neglected a rich corpus of other types of nature-oriented art (cf. 2000, p. 58). While these arguments were made against the backdrop of a wish to enhance the impact of ecocriticism – a wish that has already started to come into fulfilment as ecocriticism sees a steady growth – other critics turn more explicitly against nature writing itself. Dana Phillips, for instance, criticizes the epiphanic tradition of nature writing. In *The Truth of Ecology: Nature, Culture and Literature in America* (2003),⁵ he argues that nature writing makes insufficient use of scientific theories because it is “too preoccupied with the self as the formative and essential element of experience” (p. 195). Instead of pondering actual environmental risks, a lot of modern nature writing seems to be more occupied with “writing about a response to nature” (ibid., p. 210), he notes. Slightly later, Timothy Morton’s *Ecology without Nature: Rethinking Environmental Ethics* struck another blow against what he calls nature writing’s “ecomimesis” (2007, p. 77-78). Although Morton generally defends nature writing, he criticises its “substantialist view of nature” (ibid., p. 16) for persuading its readers that the natural world exists as a stable reality outside the body of text that is easily accessible at that. Morton stresses the need to trace “a nonsubstantialist countertradition” (ib.). Phillips and Morton have joined a company of eco-critical voices that query the practice in which ecocritics so far have dealt with “self-indulgent nature writing” (Westling, 2014, p. 6).

I argue in this study that to read nature writing through an essay genre perspective means not only to understand the poetic and epistemological function of this form, but also to acknowledge the importance of meta-discourses that can occur within the body of text itself, and that this at least partially counters the criticism put forward by Phillips and Morton. Nature essays often contemplate their own conditions of textual production, yet without indulging in the excesses of postmodern self-reflexivity. In Hudson’s essay we have seen how the text reflects on the impact of science on our vocabulary, making it clear that in language itself lies always an interpretation of the natural world. Nature as such cannot be represented in writing because it is always discursively pre-determined, “an achievement of literary artifice, a stylisation, an intensification brought about by the concentration and development of imagery” (2010, p. 195), as Richard Kerridge has put it. Through their writing, however, essayists can target an empirical world which they aim to affect with their texts.

⁵ See my chapter on epiphanic nature experiences for a more thorough engagement with Phillips’s critique of the epiphany as a paradigmatic rhetorical device of this self-absorbedness.

By reflecting on the use of language, essays form part of the self-reflexive type of nature writing Peter A. Fritzell contrasts in *Nature Writing and America* with naively mimetic forms. As he argues, “the conventional criticism of the genre cannot deal with those parts or versions of nature writing which are, intentionally, or otherwise, self-reflexive” (1990, p. 65).⁶ In particular, contemporary nature essays often deliberately ponder the literary process of creating nature images which feed into the discourse on nature, and in doing so exhibit the mimetic act on which they rely. Although Fritzell does not mention the essay genre tradition, self-reflexivity is a central component of essay writing (cf. Adorno, 1991, p. 32; Jander, 2007, p. 26; Nübel, 2006, pp. 65-66).

The turn towards genre questions is not new in ecocriticism (see Clark, 2011, pp. 35-45; Kerridge, 2014; Zemanek, 2017), but it remains a matter of debate whether it is capable of enabling a better understanding of the literary discourse on the natural world.⁷ The present study revisits the essayistic branch of nature writing by examining it through the lens of essay genre theory, holding the belief that a genre perspective allows for a better understanding of the epistemological and poetic potential of this literary form. Close readings illuminate the interplay between characteristics of the essay and different forms of attributing meaning to the natural world. As a way of translating the different human impulses to frame nature into a systematic order, I analyse the central epistemological formations of the nature essay.

The concept of epistemology as the science of knowledge dates back to ancient Greek philosophy. Etymologically the word ‘epistemology’ is derived from the Greek verb for ‘to know’. But the concept of the ‘épistème’ as “something like a world-view [...], a general stage of reason [*stade général de la raison*], a certain structure of thought” (2002, p. 211) was introduced much later by Michel Foucault to describe the discursively pre-shaped nature of knowledge and truth (cf. 1994, p. 168). According to Foucault, epistemes are unconscious assumptions underpinning discursive power knowledge systems: “[b]y episteme we mean, in fact, the total set of relations that unite, at a given period, the discursive practices that give rise to epistemological figures, sciences and possibly formalized systems [...]” (2001, p. 211)

⁶ In a diachronic overview, Fritzell sketches the intersecting genre paths which brought about the rise of nature writing (p. 80), but leaves out the essay genre.

⁷ Patrick D. Murphy, for instance, has argued that “the determination of genre and consideration of mode as well as genealogies of literary influence and traditions have generated conflict and confusion about what constitutes the American literature of nature” (2000, p. 1).

While Foucault interprets these knowledge formations diachronically, I define three epistemes that have continually shaped nature writing across national boundaries and epochs, but which are prone to variation over time and in themselves heterogeneous. Unlike Foucault, I do not focus on the interplay between discourses and power, but stress the impact of pre-existing patterns of knowledge on the ways in which essayists contemplate and describe the natural world. In adopting a triadic model, I follow Hartmut and Gernot Böhme, who have singled out three major forms of human interaction with natural forces. Where the brothers Böhme distinguish between a mythical-religious, an emotional-moral, and a technological mode (2004, p. 297), I propose a slightly different model in which epistemes intersect with particular writing strategies. The encyclopaedic-scientific episteme revolves around the materiality of the physical world; metaphysical-spiritual epistemologies depend on ideas concerned with non-physical entities that are usually not empirically verifiable; and ethical epistemologies feed on ideas about the right mode of living. These three epistemes may occur separately, but more often they are inextricably intertwined. Throughout this thesis, I explore these epistemic strands and the aesthetic strategies that constitute them in greater detail. I am particularly interested in interdependencies between aesthetics and correlating types of emotional, moral, and scientific knowledge about nature. One of the benefits of an ecocritical take on nature essays is its ability to contribute to the understanding of the close relationship between our knowledge about the natural world and the existence of this knowledge in language. Different ways of framing the natural world in writing tie in with determined world-views which are produced, reproduced, and transformed by nature essays. I will examine the concepts of epistemes in greater depth in the first chapter of this study.

Roaming in an Interdisciplinary Field: Textual Corpus

There exists a large corpus of research dedicated to Anglophone nature writing. This encompasses a great variety of articles, monographs, and conference proceedings, some of which I have already mentioned, on a largely unchanging canon of key figures in the body of nature writing.⁸ Contrary to the belief that nature writing “is

⁸ Among the names repeatedly encountered are: Henry David Thoreau, John Burroughs, John Muir, Mary Austin, Aldo Leopold, Edward Abbey, Loren Eiseley, Annie Dillard, Barry Lopez, Gretel Ehrlich, Peter Matthiessen, Gary Snyder, Terry Tempest Williams, Rick Bass, Rachel Carson, and Wendell Berry.

fundamentally an American phenomenon” (Fritzell, 1990, p. 3), I will explore the nature essay as an international form that has its genre roots in the European tradition of the essay. Language-wise, I propose to draw a wider, more comparative panorama than most of these scholars; genre-wise I will narrow the scope down from travel accounts, nature diaries, memoirs, and field reports, which make up the canon of nature writing, to literary essays. While essayistic contemplations of nature-related themes may feature in other genres, it is with a few exceptions the nature essay in its pure form that interests me most because this allows me best to work out the central characteristics of this form.

My corpus includes canonical essays which have been anthologized in numerous essay collections, such as Hudson’s *Wasps*, and are re-evaluated here in an ecocritical context, contemporary essays which promise to shed light on more recent nature discussions, and central works of nature writing that are here read as essays or essay cycles, often for the first time. My selection of texts is symptomatic rather than exhaustive and it is subjective in that it is circumscribed by my ability to read texts in German, English, French, and Spanish, but not in other languages. Holding the belief that it is better to analyse texts in their original versions, I have chosen not to write about works which I know only in translation. I have, however, added English translations for the purpose of comparison. By excluding other literatures with equally important nature essay traditions I do not mean to say they matter less. Rather, this study traces some important strands of nature essay writing, in the hope that they might reveal universal tendencies that will be applicable to other cultural contexts. While intertextual relations exist between some of the essays I analyse, others are compared on the basis of thematic, structural, and aesthetic affinities. The eighteen principal texts on which my discussion of the nature essay is grounded range, roughly, from the last quarter of the eighteenth century to the present. They are in the sequence of their publication:

Jean-Jacques Rousseau, *Les rêveries du promeneur solitaire* (*The Reveries of the Solitary Walker*, 1782)

Alexander von Humboldt, *Ansichten der Natur* (*Views of Nature*, 1808)

Domingo Faustino Sarmiento, *Facundo. Civilización y barbarie* (*Facundo*, 1845)

Henry David Thoreau, *Walden* (1854)

Robert Musil, *Das Fliegenpapier* (*The Flypaper*, 1914)

Virginia Woolf, *The Death of the Moth* (1942)

Aldo Leopold, *The Land Ethic* (1949)

- J.A. Baker, *The Peregrine* (1967)
Ernst Jünger, *Subtile Jagden* (*Subtle Hunting*, 1967)
Joyce Carol Oates, *Against Nature* (1988)
Günter Grass, *Totes Holz: Ein Nachruf* (*Dead Wood: An Epitaph*, 1990)
Peter Handke, *Epopöe vom Verschwinden der Wege oder Eine andere Lehre der Sainte-Victoire* (*Epopoe of the Disappearing Paths or Another Lesson of Mont Sainte-Victoire*, 1995)
Eliot Weinberger, *Naked Mole-Rats* (2000)
W.G. Sebald, *Die Alpen im Meer* (*The Alps in the Sea*, 2001)
David Foster Wallace, *Consider the Lobster* (2004)
Kathleen Jamie, *Findings* (2005)
Andreas Maier/Christine Büchner, *Bullau. Versuch über Natur* (*Bullau. An Essay on Nature*, 2006)
Andreas Martin Widmann, *Mind Gardens* (2013)

Many of these authors have received some kind of training in the realm of natural history or science. Jean-Jacques Rousseau, Alexander von Humboldt, Robert Musil, and Ernst Jünger, for instance, all studied natural sciences. Virginia Woolf and others practised natural history from early on, collecting plants and insects. J.A. Baker, Kathleen Jamie, Andreas Maier and Christine Büchner are amateur bird-watchers and Thoreau considered himself a scientist in the tradition of Humboldt. This goes to show that essayists often act as interdiscursive agents who swiftly move between the sciences, the publishing industry, and literature (cf. Braungart/Kaufmann, 2006, p. vii). The amphibian nature of the nature essay means that its narrators can be at home on various different grounds: they move between ‘two cultures’, (Snow, 1998) as they incorporate scientific facts into their subjective take on nature. This makes them particularly well-suited to reflect on ecological processes in which human and non-human agencies are entangled.

Outline

Turning Nature into Essays develops its arguments in four major steps. Chapter 1 lays out the theoretical foundation by introducing the key characteristics of the essay genre, while Chapters 2-4 follow with textual analyses. Looking back at the European roots of the nature essay, the first chapter accounts for why this study takes as its point of departure the turn of the nineteenth century. It discusses the productive symbiosis between the literary essay and natural history discourse that occurred in

the second half of the eighteenth century, as it sees in Jean-Jacques Rousseau's *Les rêveries du promeneur solitaire* (wr. 1776-78) a founding document of the nature essay tradition. I then draw on a variety of essay theorists to help make my case on the nature essay's unique way of communicating knowledge, by employing among others Theodor Adorno and Max Bense, but also more recent research by Georg Stanitzek and Peter V. Zima. This chapter also introduces in greater detail the concept of epistemes through which essayists organize the relationship between the essayistic self and its environment. It explains what makes the essay particularly qualified to depict and contemplate the natural world.

Chapters 2, 3, and 4 follow the scientific-encyclopaedic, metaphysical-spiritual and ethical episteme through a wide range of close readings. At this point, the study moves from an abstract, genre-centred approach to a series of attempts to define universal features of the nature essay. Chapter 2 is the first textual analysis chapter. It explores in three subchapters the empirical roots of nature essay writing that nourish the aesthetics of collecting and connecting, measuring and mapping, and data representation. These textual strategies represent the nature essay's penchant for encyclopaedic patterns of knowledge. This chapter demonstrates that while essays feature aesthetics that represent a strictly material grasp of the natural world, they also reveal shortcomings of an encyclopaedic take on nature. A merely materialistic view almost always falls short of capturing the essence of nature experience. Depictions of emotions, aesthetics of the sublime, and other forms of literary inwardness stage the process through which a clear perception of the material world is blurred and becomes subjectivised. Chapter 3 analyses these metaphysical phenomena more closely. It explores the textual performance of nature experiences that are located within the essayistic subject-speaker and therefore not empirically measurable. This chapter consists likewise of three subchapters that introduce the main aesthetic strategies of representing metaphysical dynamics: epiphanic aesthetics, irony, elegy, and tales of transformation and experience, as represented in the essay's capacity to turn the depiction of spiritual nature experiences into a confrontation with harmful social conventions that foster environmental destruction. Finally, Chapter 4 asks in which ways essays can be ethical: How do they process information about the environment in order to make an ethical argument, and in which ways do they change this information by turning it into literature? This chapter argues that nature essays negotiate value systems; they challenge norms and pose ethical

questions. This happens in the way they describe nature through a particular vocabulary and rhetoric as well as through discursive contemplation. Adopting the categories of anthropocentric and physiocentric ethics, the chapter explores the interplay between general ethical contemplations and narratives of specific events of decay and exhaustion, which are often reshaped through the story template of the Apocalypse. Finally, the Conclusion brings this exploration of the nature essay to a close at a point where it looks back at the reverberations of paradigm shifts, in an attempt to deliver the first comprehensive study of the nature essay.

1. The Nature Essay and Genre

1.1 Aspects of the Essay: Characteristics of Form and Function

I have already pointed out in the introduction that nature essays, so far, have often been discussed under the umbrella term ‘nature writing’. In the context of ecocriticism, nature essays have in fact been treated as nature writing. Scholars, however, often mention key genre characteristics of the literary essay when outlining the defining features of nature writing. Michael Branch, for instance, writes: “the term ‘Nature Writing’ has usually been reserved for a brand of nature representation that is deemed literary, written in the speculative personal voice, and presented in the form of the nonfiction essay” (2001, p. 91). Scholars of the essay, on the other hand, have hinted at affinities between the nature essay and similar types of nature writing. The *Encyclopaedia of the Essay*, a standard reference work of essay genre scholarship, in one of the few attempts to define the nature essay notes that the “nature essay is a heterogeneous form that draws on travel narrative, philosophy, landscape description, environmental reporting, outdoor and recreational writing, natural and local history, autobiography and diary, prose fiction, and other genres.” (Snider, 1997, p. 593) This definition stresses a shared interest in nature rather than genre kinship, in addition to falling short of presenting a more complex vision of the interplay between genre, topic, aesthetics, and epistemologies. Nonetheless, any synonymous use of ‘nature essay’ and ‘nature writing’ is a reminder of what the former, as a branch of the latter, has in common with this larger phenomenon:¹ both emphasize interaction between a human observer and a representative of nonhuman nature. Don Scheese, for instance, describes nature writing as “a first-person, nonfiction account of an exploration, both

¹ Andreas Goebel argues in this direction. His study of Edward Abbey is one of the first to use the German version of the term ‘nature essay’ (see 1995, p. 21).

physical (outward) and mental (inward), of a predominantly nonhuman environment” (2002, p. 6). Many nature essays tick these boxes. By bringing together the essay’s reflective subjectivity and intense dialogue with nature, the nature essay has carved out its own substantial niche in the field of nature writing. A useful working definition of the nature essay, therefore, should describe it, very broadly speaking, as a nature-themed subgenre of the literary essay determined by unique aesthetic and epistemological characteristics. The nature essay, accordingly, can be understood with regard to its topic, nature in the widest sense, and with regard to genre features that are indicative of the essay tradition. Yet, although much nature writing is indeed essayistic, and although the literary essay shares its nonfiction status with other popular types of nature writing such as travelogue, field report, diary, and memoir, the nature essay is distinguished by formal features.

On the one hand a nature essay can be defined by acknowledging what it is not. The nature diary, for example, relies on a chronological sequence of individual entries arranged per date. The memoir links nature reflections to an autobiographical life narrative. Travel writing explores nature within the narrative frame of a journey. The context of communication in which a writer creates a nature essay and in which a reader receives it differs significantly from the more private mode of communication we find in other personal nonfiction genres. Unlike the nature-themed letter that addresses a personal correspondent and unlike the nature-orientated diary or journal that unfolds its monologue in the sphere of private contemplation, the nature essay foregrounds communication with the reader because essays are usually written to be published and read in journals, newspapers, magazines, books and more recently in blogs online. This goes to show that while the nature essay clearly bears resemblance to other nature writing forms, each of these forms displays characteristics that set it apart. The term ‘nature essay’ implies its own, broad semantic range as it refers both to the subject *and* to the literary form. Nature essays always include characteristic features of the essay genre. So, on the other hand, nature essays can be defined by recognizing them for what they *are* in terms of genre, namely essays. As such, they are – as already stated – first of all determined by their content. In a chart or diagram visualizing its relation to other forms of writing, the nature essay would have its place between other essayistic writing which does not deal with nature to the left, and written depictions of nature which are not essayistic to the right. Research

into the nature essay, thus, must be concerned with synergies between genre epistemology and the discursive framing of nature.

In this study I propose a reading that takes seriously the fact that much nature writing features the genre designation ‘essay’ or participates in other ways in the essayistic genre tradition. I argue, alongside Australian scholar John Frow, that taking genre aspects into account is necessary because “genres actively generate and shape knowledge of the world” (2006, p. 2).² In my understanding genre functions as a framing device: it helps writers and readers to organize and to recognise familiar patterns in the texts they are engaging with. Every genre is shaped by its own conditions of textual production, which is why it is important to acknowledge that the act of reading an essay about nature is linked to different assumptions about the artistic process and its outcome than, say, reading a nature poem, a memoir or even a play about environmental crises. Essays create different effects of “reality and truth, authority and plausibility” (ibid.) than other genres. I will examine how essays, due to genre conventions, convey knowledge about nature in a specific way. In an ecocritical context, Adeline Johns-Putra, for example, emphasizes the importance of genre conventions when she argues that:

[a]s soon as I seek to tell of the environment [...], I rely on conventions with which to do this telling. In order to gain an immediate understanding from my listener or reader, I am aware of, and respond to, his or her existing expectations [...], and I depend on his or her prior understandings [...]. That is, as soon as we communicate, we behave generically [...]. (2010, pp. 746-747)

This chapter draws on the explanatory power of genre approaches. In order to enable a better understanding of the nature essay’s poetic form and epistemological function, I will introduce some of the key characteristics of the essay genre. In a second step, I will take a look back at the arrival of the nature essay around 1800 when the nature essay evolved in central Europe in the realms between Montaigne’s *Essais*, Linnaean natural history and the sublime, before exploring in greater detail the unique ways in which nature essays approach their topics.

Many efforts have been made to define the essay. I ground my discussion of the nature essay in a genre concept which is meant to help determine the corpus of texts discussed in this study. By way of a working definition, I consider the essay a written discourse in prose, typically but not always short enough to be read in one go,³ pro-

² Frow defines genre as “a set of conventional and highly organised constraints on the production and interpretation of meaning” (2006, p. 10).

³ Essays are usually of a length which allows them to be published in magazines, but book-length essays exist too. Montaigne’s *Apologie de Raimond Sebonde*, Jean Paul Sartre’s *L’Être et le Néant*, Elias

duced and uttered by an empirical speaker on a topic which is approached on the basis of subjective experiences, using rhetorical and poetic resources, and for which the interest of a common reader is sought (cf. Schlaffer, 1997, p. 522). Essays are, as Simon Jander has recently argued, a type of text characterised by reflection: “Reflexionstext-Typus” (2007, p. 25). As such they are equipped with a strong tendency towards contemplation and exposition (see Zymner, 2007, p. 74; Kazin, 1961, p. x; Good 1988, p. 20). Since Montaigne, essays frequently set out to develop a line of thought in front of the readers, by staging the open, process-like character of writing through rhetorical and stylistic means that give the impression that we are witnessing the process of contemplation itself (see Gamper/Weder, 2010, p. 130). The essay’s reflective movements are usually derived from a subjective instance which I call the ‘essayistic speaker subject’ because it is so often, but not always, attached to a character-like speaker who shows certain qualities of a narrator. While essays usually refrain from using fictional characters,⁴ it should be kept in mind that effects of truth, reality, and naturalness are “always and unavoidably the result of an artful invention. The speaking ‘I’ is a *persona*, the word for ‘mask’ in Greek drama” (2012, p. 251), as Patricia Foster and Jeff Porter put it. But whereas in works of fiction the narrator functions as the mediating presence for a world that is self-contained and, as a discourse, confined to the pages on which it is brought into being, the essayistic narrator is usually the mediating presence for the world she or he shares with the reader, a world that is empirically real and about which the essay makes assumptions or relates observations.

On account of their liability to factualities, essays were for a long period of time not even regarded as part of literary discourse, even if their authors had come out as writers before, because essays often presented themselves as “useful rather than beautiful” (Klaus/Scholes, 1969, p. 1). This perspective is grounded in a concept of literature according to which art is meant to be purpose-free. Its enduring influence can still be seen in many genre taxonomies. In *Kinds of Literature*, a much-cited study

Canetti’s *Masse und Macht*, and Thoreau’s *Walden* prove that the essay cannot be limited to a specific length, despite the fact that “the single overall design necessary to hold together a book-length prose work precludes the informal spontaneity of the essay” (Good, 1988, p. x).

⁴ The English periodical essayists, most famously Richard Steele (*The Tatler*) and Joseph Addison (*The Spectator*), were the exception. They introduced fictional personas like “Isaac Bickerstaff” into their essays. Denise Gigante, however, points out that at the end of the eighteenth century, as “writers began to emphasize the authenticity and originality of the speaking subject”, fictional personas disappeared into the novel, whereas the essay saw a shift from the personified essay to the familiar essay of the Romantic period, which was determined by a striving for authenticity and deep explorations into the spiritual abyss of the self. (2008, p. xxviii). For more information on the role of the essayistic narrator see also Gigante, 2010, p. 553; Widmann, 2012, p. 15; Obaldia, 1995, pp. 11-12.

of genre, Alastair Fowler points out that “ambiguity of literary status is confined to a few genres” which include “nontechnical essays” (1982, p. 11). Because it is neither solely philosophy or science nor exclusively literature, he calls the essay “literature *in potentia*” (ibid., p. 5; see also Obaldia, 1995, pp. 5-6). Yet, when freed from their original practical purpose, Fowler claims, essays can suddenly turn fully into literature:

Browne’s botany and Burton’s medicine being no longer valuable (let us suppose so) in a practical or scientific way, we are free to recategorize and to enjoy them for their intellectual qualities, their poetic vision, their alterity, or perhaps merely their quaintness. In this way the boundary can change by a sort of negative entropy. So long as works seem practically useful, they were not literature; when they ceased to function as treatises, they had a chance of coming to literature by default. (ibid., pp. 11-12)

It strikes me as interesting that Fowler mentions Thomas Browne’s writing about botany which broadly belongs to the corpus of nature essays. According to this reasoning the loss of scientific meaning is necessary for nonfiction to be re-evaluated. For some nature essays this holds true. One could argue that only their literary significance saved minor scientific works such as Johann Wolfgang von Goethe’s *Farbenlehre* (*Theory of Colours*, 1810) from falling into oblivion. But Fowler does not convincingly make plausible why it should be a prerequisite for an essay to have failed as science in order to be reappraised as literature. Today, nature essays are taken into consideration as literary texts even if they are still valuable as science. In other words: not only scientific writing which is proven to be wrong about its subject will qualify as literary. The fact that some scientific essays have made the transition into another discursive system means that the diaries and essays of ground-breaking nineteenth-century natural scientists such as Charles Darwin and Alexander von Humboldt are nowadays regarded in a literary context while their theories are in no danger of losing influence, which is evidenced by numerous literary and scientific conferences and publication on their *œuvres*.

But, also among essayists who are less well known as scientists, there is an urge to generate valuable insights on the basis of subject-based experiences and observations. In seeking to convey knowledge, essayists process the raw material of experience much in the manner of novelists. They rely on means of literary expression, using analogies, metaphors, detailed depictions, and micro-narratives alongside stylistic devices of other genres. According to essay scholar pioneers Scholes and Klaus, story-telling is neither limited to fictional forms nor is the use of interpretative commentaries restricted to essayistic writing. They conclude: “an essay can be poetic,

dramatic, or narrative as well as essayistic.” (1969, p. 4) Peter Zima argues in his recent study (2012, pp. 3-5) that the essay functions as an “intertext”, or mediator between different styles and genres. Less rigid approaches to genre treat this tendency of incorporating stylistic elements from various genres as a common feature of literary writing. And this makes sense, for there are comparatively few texts which do not feature some kind of genre mix.⁵ As different subjects demand different approaches, and, at the risk of stating the obvious, different writers prefer different modes of writing, some essays are made up solely of reflections, whereas others include descriptions, anecdotes and lyrical passages. Nature essays, in particular, depend on the genre’s capacity to adopt descriptions and evoke experience. They give nature-related topics a poetic and rhetorical treatment without withdrawing their responsibility to factualities. The literary appeal of the genre may even outshine their subject matter and prompt readers to take up an essay on a topic they are otherwise not interested in at all. Form and language may secure enduring relevance (cf. Luey, 2010, p. 24).

The idea that nonfiction is, in its turn towards the natural world, equally committed to using means of literary expression and to applying the empirical rigour of science goes back to the 1995 study *The Environmental Imagination: Thoreau, Nature Writing and the Formation of American Culture* by American scholar Lawrence Buell. In this now classic work of first-wave ecocriticism, Buell explores the interplay between rhetorics and environmental knowledge. Although he refers to nonfiction in general rather than focussing on individual genres (see pp. 8, 397), some of his ideas seem particularly applicable to the nature essay. According to Buell, “environmental writing” comes with a “dual accountability” (ibid., pp. 92, 278) to matter and to imagination. This means that it is shaped both by its penchant for empirical fact and by formal, expressive, imaginative, and rhetorical features which are indicative of literary writing. Buell argues that literary tropes in environmental nonfiction are often used to make the natural world more accessible. Strategies of invention, extrapolation, and fabrication enable the writer to make visible “what without the aid of the imagination isn’t likely to be seen at all.” (Ibid., p. 102) From the dynamics at play between the artful use of language and the undeniable reality of the environment, to which nature writing responds, arises a densified and poeticised, yet truthful image of the natural world. The role of metaphors and other tropes, therefore, cannot be limited to their poetic function within the text. They contribute to a genuine system

⁵ John Frow states that “texts are strongly shaped by their relation to one or more genres, which in turn they may modify” (2006, p. 1).

of knowledge about the environment. For that reason Buell urges us to see them as devices that help to deliver a more accurate picture of the natural world. He points out that if “the spirit of fiction is that a rose by any other name would smell as sweet, the spirit of nonfiction is that ‘without the name, any flower is more or less a stranger to you.’” (Ibid., p. 97 – in the last sentence Buell quotes from John Burroughs’ 1894 poem *Riverby*)

Reading nature essays through the lens of ecocriticism therefore means analysing the interplay between essayistic aesthetics and a particular vision of the natural world. This includes taking into account both *what* is said about nature and *how* it is said – in most cases form and content, of course, cannot be separated. A closer look at the origins of the nature essay reveals the continuous dialogue between the essay genre and nature.

The Arrival of the Nature Essay Around 1800

Nature-themed essays were written as early as the genre-designation ‘essay’ was in use. Montaigne’s *Essais* for example contemplate, at some points, relationships between human and nonhuman animals, while generally tending more towards explorations of the human self. In this context it is interesting to note that Francis Bacon, who is often cast as the villain by ecocritics for the anthropocentric, or even misogynist, underpinnings of his scientific endeavours (cf. Merchant, 1989; Schäfer, 1993), was one of the first essayists to engage with empirical nature. His *Of Gardens*, included in the 1625 edition of *Essays*, was one of the first nature-themed texts, published in one of the first essay volumes ever. This short essay contemplates the outline of the ideal garden, listing blooming periods, plant species, and the coexistence of different types of natural growth and human design. While such precursors of the modern nature writing essay exist, the form itself did not become widely used until the late eighteenth century, as Thomas J. Lyon stresses in his guide to American nature writing:

The modern personal essay began with Michel de Montaigne’s *Essais* in 1580, but more than two centuries would pass before the nature essay emerged as a literary form. When the two great eighteenth-century revolutions in natural philosophy had progressed far enough that both the response of an individual to nature and the role of nature in revealing God were legitimized, the preconditions for nature writing were in place. (2001, p. 36)

Only around 1800 the historical, scientific, and cultural context in central Europe became more favourable to the nature essay. Changes occurred in all sectors of public and private life. Europe saw the rise of Romanticism, the birth of the modern nation state, the formation of a new science system and the establishment of industrial capitalism. The modern printing industry, in particular, helped to make the essay a form for the ‘common reader’. As a result of the new educational policies in the wake of the Enlightenment, literacy rates were steadily increasing throughout central Europe, allowing more people to take part in public discussions. Periodicals were printed in high numbers and displayed in coffeehouses which again increased their circulation (see Altick, 1957, p. 47). This benefitted the capacity of the essay genre to reach wider audiences as essays were usually printed in magazines and only later anthologised in book form.

Together with these modified conditions of textual production, two other factors stand out in their relevance for the arrival of the nature essay. First, the evolution of natural history discourse, triggered in 1735 when Swedish naturalist Carl Linnaeus created a binomial taxonomic scheme to classify animals and plants and published his *Systema Naturae*, which paved the way for the dissemination of empirical knowledge of the natural world;⁶ and second, a new aesthetic interest in nature experiences, which can be discovered in numerous philosophical reflections of the time, often in the context of Romanticism.

The emergence of the nature essay took place against the backdrop of the culture of the Enlightenment that favoured empiricism and rationality and sought new classification systems to decipher the hidden order of the natural world. As distinguished from medieval bestiaries and allegorical depictions of nature in the Early Modern Age, nature essay writing favours empirically truthful depictions. The second half of the eighteenth century saw a huge increase in encyclopaedic knowledge. Plants and specimens were collected abroad and then shipped back to Europe, where they were added to the newly emerging natural history collections of the *British Museum* in London (opened in 1753) and the *Jardin Royal des Plantes Médicinales* in Paris (founded in 1626) to name only two of the most important nuclei of European science. Colonial voyages in particular nourished a new type of nature writing that cele-

⁶ Linnaeus’ system allowed both for the classification of known and unknown species. Soon it became a widespread basic device for the systematic analysis of the natural world. The classification of plants was conducted according to their secondary sexual characteristics such as stamen and stamp, and according to four optical parameters (number, form, position, and relative size).

brated the heat, dryness, and cold of ‘exotic’ landscapes which stimulated a new sensibility to visual impressions (see Arnold, 2006, p. 4). These new forms of travel writing were akin to the nature essay in their insistence that “true knowledge of the natural world – and its botanical, zoological, human, and aesthetic forms – is based on direct observation in the field” (Greppi, 2005, p. 23). Their focus on aesthetic intensities based on the perspective of the individual also tied in with the new developments in English and German philosophy. Edmund Burke’s *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful* (1756) reconsidered conventional aesthetic categories of his day by including feelings of awe as ennobling. And, slightly later, Immanuel Kant articulated in *Kritik der Urteilkraft* (*Critique of Judgment*, 1790) the German version of the sublime: “das Erhabene”. Kant stressed the intellectual power of the human mind in perceptions of nature’s greatness beyond all measurement. For the arrival of the nature essay, both the knowledge patterns of natural history discourse and the experience of the sublime are decisive. Together they feed into the dual accountability of the essay. Where Linnaean taxonomy provided a unified system of empirical classification, the sublime was capable of expressing the wonder and awe of the human imagination in the face of a natural world that could present itself as overwhelmingly flourishing.

Many works of early nature writing unfold against this backdrop, among them *The Natural History and Antiquities of Selborne* by British ornithologist and naturalist Gilbert White (1720-1793), first published in 1788/89 and reprinted due to its immense popularity almost three hundred times since;⁷ and *Travels* by the American ornithologist William Bartram (1739-1823), which first appeared in 1791 and was immediately praised as a work of scientific scrutiny and intense poetry in Europe as well as America.⁸ Although these are strictly speaking not proper nature essays – White’s book is a compilation of letters he sent to the naturalists Thomas Pennant and Daines Barrington, and Bartram’s account is best described as a travelogue – in blending natural history and literature they already bear some important characteristics of nature essay writing (cf. Branch, 1996, pp. 284-285). By relying on careful observation of their environment, they introduce a sense of ecological awareness into nonfictional writing, which influenced nature essayists that came later (see Snider,

⁷ For more information on White’s enduring popularity, see Richard Mabey’s introduction.

⁸ Thomas Lyon writes that the publication of White’s and Bartram’s writings provided “the first sign that the times were ripe for nature writing” (2001, p. 36). White’s role as a predecessor of modern nature writing is also discussed in Chapter 2 of Frank Stewart’s *A Natural History of Nature Writing* (1995).

1997, p. 593). Both Bartram and White represent a type of writer that proved immensely influential on the origin of the nature essay: the naturalist.

One of the first Europeans to explicitly refer to natural history while writing an essay was Jean-Jacques Rousseau. Like many essayists after him, Rousseau was an avid reader of Linnaeus (cf. Albes, 2001, p. 213). His interest in botany can be found both in *Lettres sur la Botanique* (*Letters on Botany*, 1771-73), in which he explains to a female friend how to start a herbarium, and in his notes for the unfinished *Dictionnaire des Termes d'Usage en Botanique* (*Notes Towards a Dictionary of Botanical Terms*, 1781). Yet, more important for the evolution of the nature essay is his posthumously published autobiographical essay cycle *Les rêveries du promeneur solitaire* (*Reveries of the Solitary Walker*, 1782). After his death in 1778, the manuscript of the *Rêveries* was discovered in two notebooks. In keeping with the peripatetic tradition, Rousseau had scribbled his reflections on the backs of 27 playing cards while walking and had later reworked and transcribed the text in his notebooks. The essays were written between 1776 and 1778 at a time when Rousseau was expelled from French society, which did not appreciate his free thinking but burnt his books, proscribed and exiled him. Fleeing his political persecutors and enemies, Rousseau sought refuge at the house of a local tax collector on St. Peter's Island in the middle of Lake Bienne in Switzerland. Lake Bienne is where Chapter Five ("Cinquième Promenade") and Chapter Seven ("Septième Promenade") are set. In those he turns most explicitly to nature, which he stages as a redemptive counter-world.

The fifth walk – each walk can in fact be read as an independent essay – takes as its starting point the physical location. Rousseau first draws our attention to the wild beauty of the Swiss landscape, stating: "Les rives du lac de Bienne sont plus sauvages et romantiques que celles du lac de Genève" (2006, p. 109) / "The banks of Lake Bienne are wilder and more romantic than those of Lake Geneva" (1992, p. 62). Nature is clearly framed in terms of its aesthetic appeal. Wildness, from Rousseau's point of view, is something positive because it allows for a greater variety of plants and different landscape types. But wildness, for Rousseau, also corresponds to a mode of thinking he pursues during his boat trips. After lunch, Rousseau's narrator often rows into the middle of the lake, where he engrosses his mind in the element of water. Reminiscences of these descriptions seem to echo through Thoreau's floating on Walden Pond:

Je conduisais au milieu du lac quand l'eau était calme, et là, m'étendant tout de mon long dans le bateau les yeux tournés vers le ciel, je me laissais aller et dériver lentement au gré de l'eau, quelquefois pendant plusieurs heures, plongé dans mille rêveries confuses mais délicieuses [...]. (2006, p. 113)

I rowed to the middle of the lake when the water was calm; and there, stretching myself out full-length in the boat, my eyes turned to heaven, I let myself slowly drift back and forth with the water, sometimes for several hours, plunged in a thousand confused, but delightful, reveries [...]. (1992, p. 66)

Rocked by the water, like a child before falling asleep, a sequence of digressive reflections is set in motion. As opposed to the systematic contemplation of political and social issues he despises – “penser fut toujours pour moi une occupation pénible et sans charme” (2006, p. 134) / “thinking always was a painful and charmless occupation for me” (1992, p. 91) – the “rêveries” allow for a freer approach to the world. In their open-endedness these dreamlike movements of thought remain linked to the Montaignean origins of the essay genre, approaching their subject from various angles without exhausting them.

Despite the idleness exhibited in such passages, Rousseau's narrator is far from doing nothing. In the fifth chapter, he outlines the staggering encyclopaedic project “de décrire toutes les plantes de l'île sans en omettre une seule” (2006, p. 111) / “describing all the plants without omitting a single one” (1992, p. 65). The idea of gathering all the plants on the island is only one expression of Rousseau's interest in natural history. On his walks he carried both a copy of Linnaeus' *Systema Naturae* and a magnifying glass. Rousseau preferred local botany to what he called rather contemptuously “exotic botany” – the naming and collecting of plants on overseas voyages (see Cook/Kelly, 2000, p. xxiv). Although he allegedly despised systematic thinking, he held no such prejudice against botany. Botanizing follows, as Christopher Kelly and Alexandra Cook note, other rhythms than Rousseau's metaphysical digressions, because it “offers endless variation combined with the consistency of structure” (ibid., p. xxii). In order to systematize nature, Rousseau even comes up with the idea of dividing the island into “petits carrés dans l'intention de les parcourir l'un après l'autre en chaque saison” (2006, p. 112) / “small squares [...], with the intention of covering them one after the other in each season.” (1992, p. 65)

Although the will to roam freely in an environment and the project of a systematic botanical study appear at first contradictory, for Rousseau they are not mutually exclusive. The opposite is in fact the case: the dual accountability of the nature essay explains sudden changes in perspective as Rousseau switches from the mode of con-

templating nature's beauty to reflections on how to classify plants. The openness of the essay form helps to include material belonging to the two decisive discourses of early nature writing: aesthetics *and* natural history. Rousseau presents himself both as a Linnaean botanist who lists all the floral species he discovers on the island, and as a romantic wanderer, drifting here and there. According to Eric Leborgne, botany for Rousseau offers an alternative way of communicating with the entirety of existence. Through botany he regains a primitive contact with nature. In systematizing plants, Rousseau seeks not only to re-establish an intimate connection with the natural world, but also to negotiate his place in the world (cf. Leborgne, 2006, p. 39). Expelled from society, he finally finds alleviation in nature and states that happiness is the best revenge against his enemies he can think of. We do not know whether Rousseau would have finished his encyclopaedic project had he spent more time in Switzerland. He stayed only five weeks before the government of Bern ordered him to leave Lake Bienne.

Chapter Five of the *Rêveries* is a milestone of early nature essay writing because it promotes the close scrutiny of living specimens outdoors rather than studying natural history cabinets inside. Besides, it combines empirical approaches to nature with an elaborate subjective style, and makes extensive usage of digressive contemplations. The denomination 'nature essay' was, however, not yet in use at the turn of the eighteenth century. Rousseau sought to distinguish himself from Montaigne in the first chapter, writing:

Je fais la même entreprise que Montaigne, mais avec un but tout contraire au sien: car il n'écrivait ses *Essais* que pour les autres, et je n'écris mes rêveries que pour moi (2006, p. 62).

My enterprise is the same as Montaigne's, but my goal is the complete opposite of his: he wrote his *Essays* only for others, and I write my reveries only for myself (1992, p. 7).

Even so, Montaigne's influence on the *Rêveries* must not be overlooked. There is no Montaigne of the nature essay, but Rousseau is the closest we get to a founding figure. Not only does he provide a model for nature essay writing by establishing the clearest link between the essay genre and the contemplation of nature, he also blends metaphysical dreaming of nature with systematic empirical exploration, combining thus different ways of experiencing the nonhuman world.

1.2. Ways of Knowing and Making Sense of Nature

Many formal features of the essay were part of its discourse from the very beginning. Montaigne and Bacon laid the foundation for essayistic epistemologies in the decades around 1600, and the claim that the essay genre is equipped with access to unique patterns of knowledge outlasted them. In the famous sixty-second chapter of Robert Musil's unfinished novel-essay, *Der Mann ohne Eigenschaften* (*The Man without Qualities*, 1930-43), his protagonist Ulrich asks:

Ein Mann, der die Wahrheit will, wird Gelehrter; ein Mann, der seine Subjektivität spielen lassen will, wird vielleicht Schriftsteller; was aber soll ein Mann tun, der etwas will, das dazwischen liegt? (Musil, 2001, p. 254)

A man who wants the truth becomes a scientist; a man who wants to give free play to his subjectivity may become a writer; but what should a man do who wants something in between? (Musil, 1997, p. 274)

When Ulrich goes on to wonder if the essay might be one possible solution to this dilemma, he anticipates one of the central ideas of essay genre theory: the concept of seeking knowledge in the realms between literature and science. The following brief survey of essay theory looks into assessments of the genre as a mode of organizing and recording knowledge. It assembles various influential attempts to comprehend and pinpoint what is unique to the genre with regard to its epistemological potential – a potential that can be realized only in each individual example of an essay but that nonetheless unites and defines these examples within the category of their genre. As it turns out, most of these epistemological assets are related to the rhetorical strategies and formal features that become visible on the surface structure of the text. In other words, I will try to work out how what goes on underneath, on a pre-verbal level, affects the strategies of writing and composition in the essay.

Our understanding of science and literature as detached systems is relatively new. In Montaigne's and Bacon's day they would not have been separated as clearly as by Ulrich. The historian David Cahan points out that the concept of modern science as a self-contained approach to knowledge about the world originates in the nineteenth century:

By the final third of the nineteenth century, one could speak legitimately, that is, in the modern sense, of 'science', 'scientist', and the disciplines of science. These new labels reflected the fact that science had both delimited itself more fully from philosophy, theology and other types of traditional learning and culture and differentiated itself internally into increasingly specialized regions of knowledge. (2003, p. 4)

Cahan describes how a system and concept of learning that had formerly comprised science and several other fields began to be split and continued as a multitude of dis-

ciplines, including biology, geology, and geography, each of which developed its own expert terminology and methods.⁹ In order to open research to the public, new types of writing that could translate scientific findings into a language addressing non-expert readers emerged. Alongside popular science writing, literary essays performed so-called “interdiscursive tasks” (Parr, 2006, p. 3).¹⁰ According to Germanist Rolf Parr, essays help to make knowledge accessible by using literary techniques such as recurrent motifs, narratives, metaphors, descriptions, and comparisons. Those techniques help to engage the reader in a playful imaginative process rather than expert contemplation. The German Americanist and ecocritic Hubert Zapf emphasizes that the interdiscursive potential of literature proves particularly helpful in the context of ecology.¹¹ By calling literature a form of “cultural ecology” (2002, pp. 33-39), Zapf argues that literary texts are capable of negotiating the relationship between nature and culture on a symbolic level. He identifies three major literary activities in the context of environmental discourse. Those are: to reason, to imagine and to reintegrate expert knowledge. Literature has the ability to make abstract ecological concepts immediately accessible by transforming them into concrete images of the interaction between organisms and their environment.

At the beginning of this Chapter, I have argued that different genres come with different aesthetic and epistemological capacities. In the context of ecocriticism, Richard Kerridge only recently raised the issue of forms and genres again. In his article for the *Oxford Handbook of Ecocriticism* he discusses the potential of different types of literature to create knowledge and awareness, and even to inspire action against environmental damage caused by humans. Even though he stresses the belief that literature might actually influence human attitudes in the long run, Kerridge points out that not all genres have the same impact on their readers. He argues that “we might allocate different tasks to different literary forms and genres.” (2014, p. 369) Science fiction, climate catastrophe thrillers, and horror novels, for instance, draw on shocking effects capable of scaring us. Modernist writing with its cut-up and collage techniques can represent the decentred nature of global environmental change (see *ibid*, pp. 372-373). Realistic fiction and poetry are capable of showcasing the

⁹ For an overview of science before 1800, see Hankins, 1985, Chap. 1). Andreas W. Daum (1998; 2004) discusses changes that the systems of knowledge went through during the nineteenth century in great detail.

¹⁰ The term ‘inter-discourse’ was introduced by Jürgen Link, whilst the concept of discourses originally dates back to Michel Foucault’s *L’ordre du discours: leçon inaugurale au Collège de France prononcée le 2 décembre 1970* (1971).

¹¹ See Chapter 2.1 for a brief discussion of ecology.

causes and results of environmental damage and the complexity of human emotional reaction, including evasion, in this period when the effects of climate change have not yet fully emerged. Nonfiction on the other hand – Kerridge does not distinguish between separate genres of nature writing – has the potential of engaging readers in a dialogue with their environment by providing both information and personal meaning:

nature writing is able to integrate personal stories into the wider picture provided by science and cultural history. If a new commitment to environmental care does spread through modern culture, it seems likely that an essential part will be a renewed willingness in industrialized societies to find social and personal meaning in seasons, landscapes, and the drama of life and death in nature. (Ibid., p. 372)

According to this reasoning, the nature essay's focus on subject-based meaning together with its interest in science could indeed be capable of inspiring a new attitude of environmental concern among its readers. By blending personal anecdotes with powerful descriptions and general contemplation, nature essays can bridge the gap between different paradigms of knowledge and in doing so create uniquely literary patterns of interdiscursivity. Before the concept of discourse/inter-discourse emerged in the late 1960s, the German philosopher Max Bense (1947) had already introduced the useful term of an *ars combinatoria* with regard to the hybrid form of the essay. Bense refers to the fact that essayists pick up ideas and extracts from other texts by incorporating them into their own discourse. In doing so, they re-contextualize their material. The use of elements from diverse sources opens the text up to the voices of others, resulting in a hybrid, collage-style form (see also Chadbourne, 1983, p. 133; Miller, 2011, p. 76).

Theodor Adorno, in another central contribution to essay theory, looks into the configuration between those heterogeneous elements and finds breaks and dead ends. He consequently points to the discontinuous quality of essayistic writing, a mode that allegedly matches a fragmentary reality (1991, p. 16). But, in addition, it also establishes a pattern that can fulfil unique knowledge-related tasks. According to Adorno, its lack of an overarching systematic order is a major innovation of the essay genre. He explains the heightened epistemological abilities of the essay through correspondence with its open form, distinguishing the essayistic mode of thinking from René Descartes' four rules of science as established in the *Discours de la méthode*

(1637).¹² Essayists argue differently from scientific writing, which proceeds from minor to major contexts, breaking subject areas down into various smaller portions as it subordinates minor topics to seemingly more important issues. Rather than following a particular scheme in pursuing knowledge, the essay “coordinates elements instead of subordinating them” (Adorno, 1991, p. 22; see also Müller-Funk, 1995, p. 11). According to Adorno, the essay’s open-endedness allows its author to approach a topic from various angles without exhausting it:

In opposition to the cliché of ‘comprehensibility’, the notion of truth as a causal relationship, the essay requires that one’s thought about the matter be from the outset as complex as the object itself [...]. If science and scholarship, falsifying as is their custom, reduce what is difficult and complex in a reality that is antagonistic and split into monads to simplified models and then differentiate the models in terms of their ostensible material, the essay, in contrast, shakes off the illusion of a simple and fundamentally logical world [...]. (1991, p. 15)

Instead of analysing a topic systematically and risking loss of its greater complexity, the essay creates a different panorama, relying on individual and unique experience as its fundamental structure. Essayistic patterns of thought allow the thinker to see something from inside, without seeking to understand it totally, enabling him or her to be free to remain in dialectical provisionality. The essay’s principal open-endedness beyond its actual end on the page is grounded in its tendency to combine all types of material. Drawing on Friedrich Schleiermacher’s hermeneutics, Georg Stanitzek recently observed that essays nearly always feature elements of discontinuity. Stanitzek (2011, pp. 57-58) singles out what he calls the “hermeneutischer Sprung” (“hermeneutic leap”), that is a textual moment in which thoughts suddenly stray in a new direction.¹³ This happens as a break from the former context of meaning that threatens the comprehensibility of the literary text.

In the context of nature essay writing, this open-endedness turns out to be an advantage over scientific approaches that are limited to the questions and tools of their research paradigm. Ecological themes hardly ever affect only a single area of research. Harking back to Adorno’s *The Essay as Form*, Timothy Clark therefore stresses the transdisciplinary potential of the essay genre. He underscores the fact that it is the freedom of the essay to “embrace material from diverse sources that would not be admitted in a scientific paper” (2011, p. 36). Essays are free to employ

¹² In a nutshell, Descartes’ four rules ask us: to accept as true only what is indubitable, to divide every question into manageable parts, to ascend from the simplest to more complex issues, and to review frequently enough to retain the whole argument at once. For an English version of *Discours de la méthode* with an introduction into Descartes’ theory of scientific methodology see Descartes, 2006.

¹³ Jeff Porter, similarly, argues: “Novels have plots; the essay is famous for rambling, its paratactic structure favoring breaks and digressions over continuity” (2012, p. ix).

scientific material, but they can also be impressionistic and humorous, and adopt a subjective point of view. This makes them particularly suited to tackle the human involvement in complex ecological issues.

The use of the restricted perspective of the essayistic speaker subject can be understood as an epistemological strategy that bears some resemblance to the rhetorical figure of the synecdoche. It functions like a magnifying glass in that a part of reality is observed, holding the belief that particular structures within the world are like a pattern that can be found in other parts, too. For Peter Zima the “potential for bringing about a spontaneous synthesis between the particular and the general, for bridging the gap between experience and the concept”, might even be one of “the most fascinating aspects of essayistic writing” (2010, p. 69). This brief tour through essay theory lays the ground for my discussion of the poetic and epistemological function of the nature essay that follows now and later.

Reflection, Description, Introspection: Communication of Knowledge in the Nature Essay

From the very beginning, essays have featured multiple voices. Reading Montaigne’s *Essais* today means being confronted with a mash-up of content presented in different styles. In order to move from one mode of writing to the next, Montaigne had to change levels. Such changes in level are not only key to the essay genre’s formal outline, they are also a vital formal feature that allows nature essays to generate knowledge. To understand this better, I suggest making three distinctions: between an outbound visual *description level* that focuses on the empirical side of nature; an inbound *introspection level* that conveys mostly invisible, often emotional responses to nature, in its most radical form taking the shape of a stream of consciousness type of reflection, yet more often appearing as a loose internal monologue; and a *reflection level* that is mainly characterised by associative chains of reasoning and contemplation, as it aims for a more general explanation of the world.¹⁴

On one level nature essays describe. The use of detailed visual depiction allows the essayist to bring to life material objects such as animals, plants and stones, but

¹⁴ Aldous Huxley similarly determines a “three-poled frame of reference” for the essay genre. He points out that there “is the pole of the personal and the autobiographical; there is the pole of the objective, the factual, the concrete-particular; and there is the pole of the abstract-universal.” (1958, p. v) Whereas Huxley argues that most essayists are at home “in the neighbourhood of only one of the essay’s three poles” (ibid.), I argue that nature essayists constantly shift between them.

descriptions also evoke larger elements and processes like landscapes or dynamics within ecosystems. I call this level the *description level*. In its focus on the visible world it ties in with empirical approaches to nature that can be traced back all the way to the beginnings of the essay genre. In line with Francis Bacon, many nature essayists are interested in the factuality of the physical world. They foreground extra-textual reference. Take the example of a tree; let us assume it is a pear tree. When mentioned in an essay it has a different textual rank and function than a pear tree that features, for instance, in a novel. Linda Hutcheon explains the reasons for this in her taxonomy of levels of reference in literature (1987, p. 9). Although Hutcheon grounds her discussion in metafiction, most of her ideas are also applicable to the essay genre. She identifies four referential types: intertextual (to the text and other texts), autorepresentational (to the text as text), intratextual (to the text and the world it creates), and outer mimetic (to the text and the empirical world).

Intertextual and autorepresentational levels of reference point to text-centred processes. This means that literature can contemplate its use of the word ‘pear tree’ but it can also charge particular textual elements with deeper layers of meaning. When Augustine, in a famous episode of his *Confessions*, remembers stealing a pear, he alludes to the act of picking fruit from the biblical tree of knowledge. Although the Edenic apple tree has been replaced by a pear tree, Augustine consciously deploys this intertextual reference to associate the action with sin. Of course such intertextual and autorepresentational moments of reference can be found in almost any kind of written text. What distinguishes nonfictional from fictional nature depictions is what Hutcheon calls the level of inner or intratextual reference. This type of reference is at play in all works of fiction when they feature elements that are peculiar to the fictional “‘heterocosm’ in all its coherence and fictiveness” (ibid.). According to this mode of reference, a fictional pear tree can be growing upside down, as long as it does so in accordance with the rules of the fictional world. So-called ‘possible worlds theory’ claims that works of fiction refer to an independent fictional world that may or may not correspond with the world beyond the text, whereas nonfiction lays claim to a truthful depiction of the empirical world. Nature essays prefer to put their pear trees with their roots down in the ground as they follow “the necessary outer mimetic reference” (ibid.).

While it is a widely held opinion in narratology that there are no clear markers to distinguish fiction from nonfiction (see Dawson, 2015, pp. 91-92) – techniques of

fictionalization, such as the presence of narrative elements, an omniscient narrator, the use of free indirect speech, and fictional scenarios, are used across the fiction/nonfiction divide – a nonfictional use of reference is communicated to the reader first and foremost through paratextual signposts, such as the epithet ‘essay’ on a book cover (see Abbott, 2008, pp. 147-148).¹⁵ Genre designations together with extended references to a reality that lies outside the body of text underscore the nature essay’s claim to an “ethic of truthfulness” (Clark, 2011, p. 37) that underpins the nonfictional depiction of geographical locations, animals, and plants.¹⁶ So, while most nature essays perform nature experiences in a novelistic manner, because this allows them to frame them as meaningful, their narrators are committed to the factualities of the physical world and stage this commitment in writing as they lay claim to truth and honesty. This equips the genre with a peculiar power to engage the reader in a reflective process concerning our relationship with nature. The fact that nature depictions in the essay, at least to a certain degree, have to tie in with outer mimetic reference involves heightened levels of commitment on the side of the writer. In addition, the exposed absence, or rather, minor role that inner fictional frames of reference play in the nature essay opens a far more direct access to nature because essays put the topic itself into focus. Since directing the reader’s attention towards the natural world is certainly an objective of many nature essays, it is necessary to ask how they achieve this formally.

Although many essays feature micro-narratives, such as the battle of the ants scene in *Walden*, or Alexander von Humboldt’s account of an animal chase by night in the South American jungle in *Das nächtliche Tierleben im Urwalde* (*The Nocturnal Wildlife of the Primeval Forest*), the minor role of internal fictions in essays manifests itself basically in the absence of an overarching fictional storyline. In essays, plot arcs tend to be absent. Liberated from the necessities of story-telling, essayists are more likely to turn their attention fully towards the natural world. The absence of internal fictions leaves the essayist room to think about other things. In place of fictional plots, essayists are free to include all kinds of descriptive material, such as data, enumerations, landscape panoramas, and historical facts, without performing narrative

¹⁵ From the genre designation follows what one could call in analogy to Lejeune’s autobiographical pact (1975), a nonfiction pact. This pact can be understood to be an unspoken agreement between reader and writer, indicating that ‘nonfiction’ refers to actual events when it claims to do so.

¹⁶ Patrick D. Murphy does not contradict the outer mimetic reference of nonfiction, but explains convincingly that the line that separates the seemingly more authentic nonfictional nature prose from fictional accounts is thinner than the genre’s rhetoric of honesty wants to make us believe (cf. 2000, pp. 50-54).

duties. Some novels of Austrian writer Peter Handke, for instance, demonstrate what happens when the author's interest in nature dissolves the novelistic form. One of his best-known recent novels, *Mein Jahr in der Niemandsbucht* (*My Year in the No-Man's Bay*, 1994), over more than a thousand pages hardly tells a story in the traditional sense. Instead, Handke depicts the nature experience of his protagonist. The writer Gregor Keuschnig roams the Parisian periphery while working on a new book. Keuschnig reflects on the artistic process and describes the lives of his friends. They share a fondness for walks through remote landscapes, including Japanese wastelands and the Scottish moors (see Hage, 1994). If we consider the impact of the vanished plot with regard to nature depictions, it turns out to be an advantage. The lack of plot constitutes a blank space which Handke fills with extensive passages of contemplation and nature descriptions. What remains of the novel's characters is a group of solitary walkers scattered around the globe. Instead of driving the plot forward, they are little short of turning into nature essayists.

Jonathan Franzen's novel *Freedom* (2010), to name a recent popular example, embodies the contrary extreme in that it features characters who *have* to practise conservation as a profession and *have* to talk about the project of launching a bird reserve in order to incorporate Franzen's interest in species conservation and bird watching into the plot patterns. Whereas the nature theme in novels always remains tied to the intratextual reference of the fictional world, the absence of internal fiction benefits nature depictions, as Kerridge notes with regard to nonfictional nature writing:

There is a tension between nature writing and the narrative drive of novels: between the stillness required of the observer of nature, and the movement of plot. In pausing to notice the natural world, a character becomes less an actor and more a watcher, mediator or proxy reader, even a narrator. Awareness of nature in novels often comes at moments of solitary relief or consolation, in which the character is able to forget the immediate pressures of plot and find the calmness of detached observation, in what feels like an escape from self. (1998, p. 149)

Kerridge hints at the inherent imbalance between story-telling and observing. Novelists have to consider the overarching course of action when they include nature depictions into their writing. Kerridge, therefore, points to the moment of "relief" that sets in when the plot is momentarily abandoned as nature moves into the foreground. This happens as a pause from story-telling. In essays, one could argue, the pause has become a prolonged state. The narrator is a permanent watcher who takes in the natural world and turns it into an essay.

Frequently, but not always tied to the essayistic narrator, there is a second level of nature depiction: the *level of introspection*. Thought reports and other techniques

of self-observation that evoke the effects that nature might have on a human observer are signposts to this level of nature essay writing. In many cases it is tied to an essayistic first-person narrator, but some essays also use proxy characters and apply introspection to them. Nature essays are often occupied with interaction as a mind expanding process. In combining passages of description with introspection, they act out one possibility of experiencing a determined environment. Some essays turn towards well-known territories as they circumscribe a local environment, whereas others are more outbound, directed towards new territories. The use of introspection enables the writer to stage the relationship between the natural world and a particular character speaker, who learns things with us. This initiates an intense dialogue between the human observer and the natural world. Emotional responses to nature, which can peak in epiphanic or transcendental nature experiences, are reproduced through means of an expressive use of language that recalls the lyric genre. Introspection is vital to this level because it opens processes of experience to the reader and makes them accessible. Essayists use poetic and rhetorical means to recreate nature experience emphatically, but in a second step the essay's tendency to generalise helps them to give a universal context to their individual experiences. The essay is, thus, not merely ephemeral-emotional, but transcends the level of personal experience. Nature essays evoke subjective experiences while they also reflect on them discursively.

In order to generate insights, essayists accordingly change levels. They relate passages of description to introspection and expand both into a greater vision of the natural world by using the freely drifting mode of contemplation. A third level of nature essay writing, therefore, is the level of *reflection*. This level comprises different forms of general reasoning and argument. It is characterised by a movement away from the empirical world and away from the self into the sphere of universal thought. Scientific theories and general environmental concerns feed into reflection. Essays in this context, once again, benefit from the lack of overarching story-lines that allows them to reproduce as many theoretical ideas as they wish. While reasoning, essays are free from the mode of disguised speech. The essay does not embed its assertions about nature into complex plot dynamics in which fictional characters are used as a pretext to make a point. When novelists include environmental issues, they usually have to take the psychological constitution and the restricted point of view of their fictional narrators into account. Novelistic reflections on nature have to tie in with

both the particular constitution of the fictional heterocosm and the narrator's knowledge, experience, and feelings. The dilemma of having to consider whether a protagonist can know, for instance, about the results of the latest report of the Intergovernmental Panel on Climate Change frequently results in characters working in science.¹⁷ Essayistic narrators draw on a seemingly more natural knowledge as they include fragments of information that are either derived from empirical observation or from what the empirical author knows. But data, expert knowledge, and theory feature rarely in an unprocessed state. Essayists include dramatizations and process ideas much in the manner of novelists, though usually without incorporating them into a greater plot scheme. On the level of reflection essayists rely on a writing style that is most explicitly explanatory. Instead of limiting themselves to singular spheres of knowledge, they cross the boundaries between separate discourses. The ability to incorporate material from different areas of knowledge allows for a unique type of writing between science and literature and gives the nature essay a liminal interdiscursive function, as outlined above.

Although I have presented the three levels of nature essay writing separately, they are of course interdependent. Through changes in level they are constantly related to each other. Nature essays feature visual descriptions of the empirical world; they shift focus towards the thoughts and emotions of the more self-centred level of introspection, and change levels once more when they employ reasoning as they steer towards an essayistic explanation of the natural world. What matters most in the context of knowledge and the essay is that changes in level allow the essayist to turn empirical nature experiences into abstract theories as they infer general insights from specific descriptions. If one were to distinguish the textual organisation of the nature essay from other literary types of nature depiction, these changes in level appear unique. It should be added that, naturally, not all three levels appear in all nature essays, and rarely in the same configuration. Some essays focus more on nature description while others foreground introspection or pursue a particular line of thought as will be seen in the textual analyses that follow later.

¹⁷ The fictional physicist Michael Beard in Ian McEwan's *Solar* (2010) and the meteorologist Tzvi Gal-Chen in Rivka Galchen's *Atmospheric Disturbances* (2008) would be two recent examples of this tendency.

Epistemes: Encyclopaedic-Scientific, Metaphysical-Spiritual, Ethical

I have introduced the three levels of nature essay writing in order to highlight one key formal feature, immanent in the text itself, which affects form and content of the nature essay. In addition to such formal features, essays are always inevitably influenced by underlying framing devices, some of which even precede the act of writing. By acknowledging that just as no human being is an island, no essay exists in a vacuum I want to draw attention to dynamics and less visible layers of meaning that run through many nature essays like undercurrents. Discussing the relevance of epistemology for this literary form, I continue to outline the methodological bases on which this study is grounded.

When I argue that nature essays, like all literary texts, are informed by and bear traces of previously existing cultural patterns of perception which they at the same time help constitute by adding to them, I am necessarily indebted to Michel Foucault. The essayist's approach to the natural world, at least partially, is the result of the context in which he or she operates. These contexts establish the conditions for the creation of knowledge, what Foucault in *Les mots et les choses* (1966) calls a discursive formation or an *épistème*. Foucault points out that our perception of the world is never free from specific assumptions about the state of the world. Epistemology explains the limits of conceivability in relation to systems of knowledge during a given period. It describes an historical *a priori*, a world-view that determines what is possible to affirm and what will be accepted as truth. Epistemes are, accordingly, the "conditions of possibility of all knowledge, whether expressed in a theory or silently invested in a practice." (Foucault, 1994, p. 168)

Foucault's understanding of knowledge takes into account historicity in that it distinguishes between two major epistemological breaks.¹⁸ Up until the late sixteenth century, the Renaissance epistemology of resemblance fostered the belief that visible analogies and similitudes understood by intuition could reveal an underlying genealogy of the world. Resemblance, according to Foucault, also determined the ways humans thought about nature: "The universe was folded in upon itself: the earth echoing the sky, faces seeing themselves reflected in the stars, and plants holding within their stems secrets that were of use to man." (Ibid., p. 17) A first significant epistemological break seems to have occurred around 1600 when belief in the truth of

¹⁸ The idea of knowledge breaks is akin to Gaston Bachelard's concept of epistemological ruptures (2002) and Thomas S. Kuhn's (2012) vision of paradigm shifts.

resemblance was questioned by the aspiration for more rational systems of knowledge. The classical epistemology of the seventeenth and eighteenth century is characterised by its striving for solid knowledge and a heightened awareness of differences. It is perhaps no coincidence that Foucault argued that “the deferred but insistent unity of a *Taxinomia universalis* appeared in all clarity in the work of Linnaeus” (1994, p. 76). Botanists like Linnaeus – who reportedly said of himself, “Deus creavit, Linnaeus disposuit” (Warne, 2007), God created, Linnaeus organized – broke with the tradition of grouping plants and animals according to subjective features like taste or smell and proposed instead a clearly definable taxonomy, based on structural similarities and differences. Linnaeus’ new taxonomies allowed humans to order the natural world, which was still understood to be God’s creation, in tableaux and herbaria. These classificatory systems embody the totalizing character of classical epistemologies, their belief in the finite, encyclopaedic nature of knowledge. According to Foucault, this belief was later challenged by the transcendental force of modern epistemology, provoked by the “absence or death of God in the Nietzschean sense” (2014, p. 230), as Mary Beth Mader observes. While Foucault remains vague about the exact time of the changes and the distinctive features of the modern episteme, he underscores the fact that the absence of a divine source of definitive knowledge throws humans back on themselves, and has the effect of triggering the birth of the new social and psychological sciences.

In the nature essays I am concerned with we encounter various epistemological tendencies that tie in with all the categories provided in *Les mots et les choses*. Yet, the historicising outline of Foucault’s scheme obliterates the different types of knowledge that overlap and intersect in nature literature, rather than superseding each other. The epistemes of nature essay discourse, as I conceive of them, are not mutually exclusive. They are ahistorical preconditions for the emergence of determined ways of depicting and contemplating nature. Nature essays frequently present themselves as a palimpsest of different ways of looking at the nonhuman world. The scientific taxonomies of classical epistemology feature in many essays and are sometimes even a major theme – as in Rousseau’s *Rêveries* – and there are even correspondences to the earlier episteme of resemblance. Essayistic subjects seek themselves in nature and understand their epiphanic experiences as revelations of a transcendental truth. This kind of intuitive, emotional knowledge sets essayistic discourse apart from modern scientific modes of observation. Essayists also contem-

plate, in keeping with the self-centredness of modern epistemologies, their own role and responsibility on this planet as they raise moral issues. These three modes of approaching nature serve as broad epistemic clusters in which I discuss the essays I have chosen as examples:¹⁹

Episteme 1: "*The Butterfly Collector*"; encyclopaedic-scientific epistemology. Axiomatic basis: what we perceive in nature is what exists. Nature can be seen, counted, and measured.

Episteme 2: "*Mother Nature's Son*"; spiritual-metaphysical epistemology. Axiomatic basis: nature is more than the sum of its parts. What truly matters is invisible.

Episteme 3: "*Animal Farm*"; ethical epistemology. Axiomatic basis: everything in nature is related to moral issues. To discuss nature means to discuss ethical issues.

In the readings that follow, I analyse how these shaping influences are reflected in literary texts and how the texts themselves enhance these intellectual paradigms. Epistemology allows us to see differences in emphasis. Some essayists turn to nature in search of a metaphysical experience, whereas others revolve around scientific findings, or relate everything they see in nature to moral issues, while ethical considerations do not seem equally relevant to others. But epistemology also reveals the numerous ties that weave these different modes of perception together, resulting in a hybrid ecological vision that reflects empirical knowledge and less visible processes. Epistemes, therefore, should not be mistaken for rigid categories. Neither do they cover the whole richness of modes of expression we find in nature essays. Some striking characteristics of nature essays, such as their use of personal narratives, do not fall into a particular epistemological category and subtle differences between objective, subjective and normative types of knowledge transcend the proposed categories. Texts are often located between different poles of traction as they are pulled in different directions. The peculiar epistemological power of the essay genre lies in its ability to mediate between these different modes of perception. Its resistance to any single, totalizing worldview is a characteristic feature of the essay.

Yet, regardless of these inevitable shortcomings of grouping texts into epistemes, I consider epistemes enabling structures that lay the ground for the textual analyses that follow by providing analytical tools to investigate the essay's idiosyncratic take on nature rather than universal satisfying categorizations. Various scholars have come up with models of organizing human ways of interacting with the nonhuman environment, some of which reverberate in my study. Hartmut and Gernot

¹⁹ I have named them, for the sake of memorability, and in order to distinguish them from Foucault's historic categories, after nature-inspired British pop song titles.

Böhme, for instance, distinguish between a mystical-religious, an emotional-moral and a technological mode of nature perception (2004, p. 297). While they define these modes as originally historic, they also emphasise their later coexistence. These categories resonate with my own, although I prefer ‘encyclopaedic-scientific’ to ‘technological’ because not every essayistic attempt to organize an environment happens through technology as we have seen with Rousseau’s botanical excursions. The encyclopaedic-scientific episteme, in my understanding, draws on and aims for an “elaborate and exhaustive repertory of information” (Encyclopaedia, 2015) concerning empirical processes and material objects, as in Foucault’s classical episteme. Spiritual-metaphysical epistemologies bring forth the intuitive knowledge of resemblance, but I also refer to the type of nature perception that is generally concerned with “that which is immaterial, incorporeal, or supersensible (esp. in explicit contrast to *physical*)” (Metaphysical, 2015). And ethical epistemologies are concerned with questions “relating to moral principles” (Ethical, 2015), as they link nature-related issues to an ethical framework of contemplation.

Following these three epistemes, the same content or sequence of events can be depicted in highly different ways. Let us consider for example the experience of a snow storm on the top of a mountain. In its purest form, an encyclopaedic-scientific essay might focus on the shape of drifting snow. It would indicate the temperature, or contemplate the human ability to stay warm despite the cold. A metaphysical-spiritual essay on the other hand would perhaps highlight different aspects, maybe singling out the loneliness inherent in this experience. Or it would frame the snow storm as a spiritual challenge. Ethically inclined essays might emphasise the changing weather conditions due to global warming that bring us particularly hot summers or they could hint at the advantages of sustainable ecotourism. The question of which episteme is present in greatest measure in a given text may be revealed through textual analysis. Recurring motifs have to be taken into consideration. Tropes and topics might also help to identify the underlying epistemologies of an essay. Again, this will be explored in the following comparative readings, beginning with aesthetics of encyclopaedic-scientific epistemologies.

2. “The Butterfly Collector”:

The Encyclopaedic-Scientific Episteme

The encyclopaedic-scientific impulse of the nature essay manifests itself in different writing strategies and techniques of reproducing knowledge in literature. Nature essays feature scientific facts, but they also reflect the basic laws of nature and reveal frictions between what is known and what is personally experienced. The shortcomings of an empirical approach to nature, as introduced by the father of empiricism, Francis Bacon, are a common theme of essay writing. The essayistic take on nature oscillates between attempts to stake out a firm body of knowledge and efforts to evoke the inherent liquidity of fluctuating shapes in nature better expressed through literature’s imaginative rhetorics. This chapter introduces three of the most central aesthetics tied to an encyclopaedic-scientific take on nature: aesthetics of collecting and connecting, aesthetics of measuring and mapping, and aesthetics of data representation. It investigates how these aesthetics strive for and struggle with finite knowledge systems, while being frequently counterbalanced and undermined by moments of uncertainty and openness.

2.1 Aesthetics of Collecting and Connecting in Alexander von Humboldt’s *Ideen zu einer Physiognomie der Gewächse* and Ernst Jünger’s *Subtile Jagden*

For a collector, “ownership is the most intimate relationship that one can have to objects” (1968, p. 67), Walter Benjamin claims in his essay *Unpacking My Library*. Benjamin sees the practice of collecting as one of the earliest modes of relating to the material world. Processes of excluding, emphasising, and ordering are capable of constituting a personality, because the collected items exhibit a fusion with the collector’s identity. Children paint objects, touch them, give them names, and collect them

as a means of making sense of their environment. In doing so, they do not act all that differently from nineteenth-century naturalists, who explored nature by drawing up inventories of plants and animals, naming, and collecting them (cf. *ibid.*, p. 61). Most naturalists collected out of a shared scientific purpose. They wanted to showcase the diversity of the natural world and understand the relationships between species and subspecies. In their herbaria they ordered plants according to their physical appearance and sexual organs. The process of collecting is determined by motions of gathering items in the open – plants are plucked, whereas animals, unless 'collected' in a zoo, are usually killed – in order to take them home, where they are observed and ordered by the criteria of resemblance and difference.

But what is the ecological value of collections? If Benjamin is right, the act of collecting alters the depth of involvement with our environment. But then, one could also argue that by picking flowers or killing animals in order to incorporate them into their collections, collectors separate them from their original environments and do so violently. This is, however, a crucial component of collecting, as Benjamin points out:

What is decisive in collecting is that the object is detached from all its original functions in order to enter into the closest conceivable relation to things of the same kind. This relation is the diametric opposite of any utility, and falls into the peculiar category of completeness. What is this 'completeness'? It is a grand attempt to overcome the wholly irrational character of the object's mere presence at hand through its integration into a new, expressly devised historical system: the collection. And for the true collector, every single thing in this system becomes an encyclopedia of all knowledge of the epoch, the landscape, the industry, and the owner from which it comes. (*Ibid.*, pp. 204-205)

Natural objects are integrated into new systems of meaning, while being extracted from the functional context they used to form a part of. Put on display in a natural history museum, they form part of a new environment: the collection. Interestingly, Benjamin already uses the terms 'encyclopaedia' and 'completeness' in the passage quoted above, referring to the encyclopaedic longing of the naturalist collector. Benjamin emphasises the benign ties between ways of collecting and personal meanings. The idea of limits and the possible risks of extinction are not yet present in his contemplation. It should, therefore, not be overlooked that while collecting means to be conscious of and pay attention to the multiple shapes and fabrics of environments, it is also a form of taking possession of the natural world, of incorporating living organisms into firm dead orders. In W.G. Sebald's *Austerlitz* (2001), a novel rich in passages that are highly reminiscent of nature essay writing, the eponymous protagonist's Great-Uncle Alphonso reflects on the numerous fossils from the glacial

period he used to find at the chalk cliffs of Cornwall and Devon and that are now gone because “unsere Sammelleidenschaft und andere, gar nicht wägbare Störungen und Einflüsse [hatten sie] nahezu völlig vernichtet” (2001a, p. 131) / “[they had been] almost entirely destroyed by our passion for collecting and other incommensurable interferences and influences” (2001b, p. 127). Collecting is a recurrent theme in Sebald’s writing. Following a picture of a butterfly collection and a description of Andromeda Lodge’s conversion into “eine Art Naturhistorisches Museum” (2001a, p. 123) / “a kind of natural history museum” (2001b, p. 119), *Austerlitz* points to the ecologically devastating impact of human collections, as indicative of Sebald’s doom and gloom scenarios of natural destruction to which I will return in Chapter 4.

Nature essay writing, which draws on the tradition of natural history collections, frequently describes practices of collecting as part of a theme-based naturalist link and frame story, exposing the quest for the collectable item rather than the archive itself. But essays also contemplate the dynamics of collecting as a topic and make use of formal features which can be understood in terms of an aesthetics of collecting. An extensive use of taxonomies, list-makings, descriptions of the process of gathering plants and specimens, and close attention to surfaces are indicative of this encyclopaedic type of writing that mimics the actual practice in writing. *Austerlitz*, for instance, features such a passage of collecting, as the narrator lists the popular German names of moth species: “spanische Fahnen und schwarze Ordensbänder, Messing- und Ypsiloneulen, Wolfsmilch- und Fledermausschwärmer, Jungfernkinder und alte Damen, Totenköpfe und Geistermotten” (2001a, p. 132) / “China Marks, Dark Porcelains and Marbled Beauties, Scarce Silverlines or Burnish Brass, Green Foresters and Green Adelas, White Plumes, Light Arches, Old Ladies and Ghost Moths” (2001b, p. 128). While this passage celebrates the beauty of different shapes and names, the last two, in particular (the sequence of names in the English translation deviates from the original), echo the risk of extinction through human collecting habits as they feature the words “Totenkopf” (skull) and “Geister” (ghosts) in their names. By listing the names of plants and animals, they are stored within the text even if they become extinct. In the age of mass extinction, naturalist collections take on a new significance because they document biodiversity. They supply us with inventories of plants and animals that originate in ecosystems of different time periods. These were once living beings that may have since become rare or even extinct.

But essayists hardly ever content themselves with listing species. Rousseau's contemplation of botanical collecting in the *Reveries*, as discussed before, could be seen as a way of negotiating his place in the world. The fact that collections are bound to strong personal affects creates a constellation in which collected items are capable of setting in motion wide-ranging processes of memory. Disruptions, digressions, and associations are the stylistic outcome of these ordering movements. Collecting, in this sense, is more than a knowledge-enhancing practice. It also bears biographical significance and can be understood as a way of investigating the interrelations between human and nonhuman organisms and items. Following Ernst Haeckel, these dynamics between various agencies have come to be called 'ecology'. In the context of actual collections it can seem paradoxical to establish a link to connective ecological practices because natural history collections involve disconnecting living beings from their diverse original environments whereas ecology, as Haeckel defined it, concerns interactions between organisms within an ecosystem. While collectors take things from diverse environments and put them in taxonomic collection systems, ecology generally rejects the isolation of creatures. Literary aesthetics of collecting, however, often tie in with connective aesthetics. Nature essayists create scientific and personal correspondences between the items they list. The essayistic speaker subject creates inter-connective orders in which different agencies are set in relation to each other, revealing ecological dependencies, *and* making use of exhaustive species inventories.

In the present chapter, I will outline some features of texts in which this mode of collecting becomes visible by arguing that there is a likeness between the physical act of collecting, the cognitive practice of connecting (for both scientific and personal purposes), and its literary adaptation in nature essays. What follows is an exploration of two German essays: one from the early nineteenth century that stands at the margin between natural history and the modern life sciences, the other from the mid-twentieth. Both draw on practices of collecting and connecting as a topic and as an essayistic mode of thinking typical of scientific-encyclopaedic epistemologies.

Alexander von Humboldt, *Ideen zu einer Physiognomik der Gewächse*

The fact that Alexander von Humboldt died in 1859 at the age of 89, the same year Charles Darwin's ground-breaking *On the Origin of Species* was published, seems like a symbolic coincidence. At the time of Humboldt's death, his vision of the earth as an

interconnected whole already seemed outdated to many (see Heyl, 2007, p. 8). Interest had shifted away from Humboldtian science,¹ and focussed on natural evolution instead (see Dassow Walls, 1990, p. 85). Humboldt was still celebrated as a German explorer of tropical regions, who was admired by such important nineteenth-century personalities as Goethe, Emerson, President Thomas Jefferson, Samuel Taylor Coleridge and Darwin,² but mocked at the same time as "an obsessive fact-monger, a hyper-empiricist drowning in detail", and because his "insistence that everything was connected to everything else irritated specialists" (2011, p. 33), as historian David Blackbourn points out. In recent times, however, Humboldt has been re-discovered as an important predecessor of environmental awareness, and interdisciplinary thinking, and as a nature writer.

From a literary perspective Humboldt's essay collection *Ansichten der Natur* (*Views of Nature*) is arguably the most interesting book that came out of his 1799-1804 South American journey – the journey on which his reputation as one of the greatest scientists of the nineteenth century is primarily based. In 1799 the Spanish Crown had issued passports for Humboldt and his companion, the French botanist Aimé Bonpland, and they were ready to leave Europe for the Americas. Humboldt was then 29 years old, of prominent Pomeranian origin, widely educated in economics, geology, and anatomy, and equipped with a fortune he had inherited after the death of his mother in 1796. He had planned to go on a journey for a very long time, but family ties and his position as inspector in the Department of Mines for the Prussian government had kept him in Germany. In June 1799, Bonpland and Humboldt left the port of Coruña in Spain on the *Pizarro*, a ship that took them via Tenerife to Cumaná in Venezuela, where they started their exploration of tropical and subtropical South America. Other than explorations for the purpose of trade Humboldt supplied funding completely by himself and could therefore mainly focus on the scientific purposes of the journey. He travelled as a naturalist, but as a result of his expertise in mining he was able to deliver important technical information on mining to the colo-

¹ According to Susan Faye Cannon Humboldtian science is the "accurate, measured study of widespread but interconnected real phenomena in order to find a definite law and a dynamical cause" (1978, p. 105).

² Darwin was an avid reader of Humboldt. He took Humboldt's *Personal Narratives* along while sailing towards Patagonia and refers to Humboldt at several points throughout his travel diary (see for instance Darwin, 2009, pp. 28, 37, 46). Andrea Wulf's Humboldt biography *The Invention of Nature* (2015) traces Humboldt's impact on Darwin, Thoreau, Ernst Haeckel, George Perkins Marsh and John Muir. See also Rex Clark's and Oliver Lubrich's anthology *Transatlantic Echoes. Alexander von Humboldt in World Literature* (2012) that features examples of responses to Humboldt that range from Goethe's novel *Elective Affinities* (1809) to Daniel Kehlmann's *Measuring the World* (2005).

nial authorities in Colombia and Mexico (cf. Blackburn, 2011, p. 32; see also Meyer-Abich, 2008, pp. 148-149; Weaver, 2015, p. 78). This involves him, at least slightly, in the colonial exploitation of American resources,³ although to exploit was certainly not Humboldt's main intention. Humboldt and Bonpland travelled from Caracas through the Orinoco region, in search of the link between the Amazon and Orinoco. Humboldt was convinced that such a link existed – a fact that he managed to prove, but that was already well-known among the indigenous inhabitants of the region, as he did not conceal. Searching for connections was a guiding principle of Humboldt's research. Along their route he and Bonpland collected plants and animals, they took rock samples and measured and mapped foreign nature, in order to create an empirical base for Humboldt's vision of global connectedness.

After his return to Europe, Humboldt worked for more than thirty years on the publication projects that documented the American journey. The particular book I am concerned with in this chapter and the next was originally merely a fraction of this vast tome, yet it is one that stands out. Due to its formal features it justifies its being treated as a work of art in its own right. Composed at first as lectures (cf. Dassow Walls/Jackson/Person, 2014, p. 5; Heyl, 2007, p. 215), *Ansichten der Natur* retains a sense of the communication between the speaking subject and its audience. The essays were first published in a single volume in 1808, which was revised and expanded several times. In comparison with the thirty-four volumes in French of the *Voyage aux régions équinoxiales du Nouveau Continent* (1805-1839), a cycle of books by Humboldt which assembled vast amounts of information on South American nature, *Ansichten* presented itself as a slim volume of popularizing essays. If the *Voyage* was the *Gesamtkunstwerk*, *Ansichten* was Humboldt's polished gem. It was shorter, written in German, and it used a stylised language that was accessible to a broader audience. Instead of exhausting a topic, *Ansichten* relied on the evidence of anecdotes and examples. In its seven chapters it reflected the whole spectrum of nature, by describing it in several distinct facets, ranging from the steppes and deserts to volcanoes, waterfalls, nocturnal animal sounds and plants.

In this chapter I will work out the aesthetics of collecting and connecting in Humboldt's work and frame it within the essay genre. My aim in doing so is to

³ It is possible to condemn his explorations from a postcolonial perspective (see for instance Fara, 2008), but the question remains whether this criticism does not miss the core of his scientific project. Besides, it should be mentioned that Humboldt's writing is often driven by his strong empathy with the natives and a radical critique of slavery that caused the British government to flinch from permitting Humboldt access to their colonies in India.

demonstrate how Humboldt’s fact gathering together with his search for correspondences translates into a comparative aesthetics of analogies that manifests itself in an abundance of rhetorical devices, notably of similes and metaphors. The central question in this context is: how does Humboldt use the essay genre to create the impression of a connected globe – what we would nowadays call a global ecosystem?

Although Humboldt never uses the genre denomination ‘essay’, his writing features key characteristics of the essay genre (cf. Heyl, 2007, p. 216). These include: the length of the texts, a strong tendency towards reasoning, and the way he uses empirical facts alongside metaphors, analogies and comparisons, and pairs them with a determined point of view. In the preface to the first edition, Humboldt describes his aim in writing *Ansichten* as follows:

Überblick der Natur im großen, Beweis von dem Zusammenwirken der Kräfte, Erneuerung des Genusses, welchen die unmittelbare Ansicht der Tropenländer dem fühlenden Menschen gewährt, sind die Zwecke, nach denen ich strebe. (2004, p. 7)

A far-reaching overview of Nature, proof of the cooperation of forces, and a renewal of the delight that direct experience of the tropics gives to a person of feeling are the goals to which I strive. (2014, p. 25)

Around 1800, Humboldt was not the only German intellectual to believe in the productive fusion of art and science. Before his journey, he had read Immanuel Kant’s treatises on the limits of human reason and he was on friendly terms with Goethe and the Jena circle. Friedrich Schelling’s “Naturphilosophie” – his philosophy of nature – provided the epistemological backbone on the grounds of which these intellectuals of the *Weimarer Klassik* and early Romanticists were concerned with the interplay between the human self and nature, between inner responses and objective knowledge. In keeping with Schelling, they stressed “the necessity to grasp nature in her unity” (Wulf, 2015, p. 128), a conviction that Humboldt shared with the Jena circle (see Millán, 2011). He believed that in order to extract “den inneren Zusammenhang der Naturkräfte” (Humboldt, 2004, p. 8) / “the interconnectedness of natural forces” (Humboldt, 2014, p. 25), it was necessary to combine facts and objective reasoning with a more subjective philosophy of aesthetic sensitivity and wonder. In the preface he therefore describes his methodology in terms of an “ästhetische Behandlung naturhistorischer Gegenstände” (2004, p. 7) / “aesthetic treatment of matters of natural history” (2014, p. 25), intended to combine “eine[n] litterarischen und eine[n] rein wissenschaftlichen Zweck[]” (2004, p. 9) / “a literary with a purely scientific goal” (2014, p. 27).

In her ecocritical study, *Sense of Place and Sense of Planet*, Ursula Heise points out that the network structure of ecological systems requires literary forms that stage "the global environment as a kind of collage in which all the parts are connected but also lead lives of their own" (2008, p. 64). She stresses the need for a literary aesthetics that is capable of connecting global and local contexts in order to rightfully portray ecological dynamics. While Heise focuses on Modernist novelistic writing, I want to argue that the essay's ability to bring about a "spontaneous synthesis between the particular and the general" (Zima, 2010, p. 69) allows Humboldt and later essayists to capture the complexity of ecological issues that concern both the local and the global sphere.

The idea that the planet Earth consists of numerous systems of interdependencies and interconnections is central to the science of ecology. Taking the Greek word 'oikos' for household, the term 'Ökologie' was first coined by the German biologist Ernst Haeckel in his 1866 book *Generelle Morphologie*. Haeckel was an avid reader of Humboldt and he expanded Humboldt's interconnective thinking into a scientific discipline of its own, by defining ecological research as the scrutiny of the relationships between organisms and their environment (Haeckel, 1866, p. 8). The household metaphor allowed him to portray the natural world as a set of coexisting organisms that interact, cooperate, and conflict with each other. Inorganic and organic elements fuse in this "System von bewegenden Kräften" / "system of active forces" (Ibid., p. 11. The English translation is my own). It is worth noting and indicative of Humboldt's role as a precursor of ecological thinking that Haeckel uses Humboldt's exact words in this definition (cf. Wulf, 2015, p. 307).

Common myth has it that Humboldt himself hit upon the idea of interconnectedness while climbing Mount Chimborazo, the Ecuadorian mountain that at 6,268 metres was once believed to be the highest mountain in the world.

As he stood at the top of the world, looking down upon the mountain ranges folded beneath him, Humboldt began to see the world differently. He saw the earth as one great living organism where everything was connected, conceiving a bold new vision of nature that still influences the way that we understand the natural world. (Ibid., p. 2)

I am quoting from the acclaimed new Humboldt biography by Andrea Wulf, *The Invention of Nature* (2015). But what does this tell us? Little more than that mountaineering lends itself to gripping depictions of a turning point experience in nature. Humboldt found interrelations wherever he went, but the process of collecting precedes his interconnective vision. In *Ansichten* he imagines nature as a system of

interdependent forces that encompasses the whole globe. Where earlier explorers, like Humboldt’s friend Joseph Banks, had seen “discreet objects and isolated natural effects” (Weaver, 2015, p. 78), Humboldt still enters the stage as a naturalist collector, but he now stresses correspondences. These connections are as much asserted in his writing as they are existent. The editors of the new 2014 English translation of *Ansichten* therefore underscore the fact that “while there are universals in this book [*Ansichten*], they are forged, not found – forged through the interconnections Humboldt uses to yoke together the objects before him with their cognates all around the planet” (Dasso Walls/Jackson/Person, 2014, p. 4). The practice of forging interconnections happens in language and in writing. Humboldt’s insistence on connectedness is based on his nature inventories. Drawing up an inventory of nature is one way of dealing with chaos, as Benjamin explains, and Humboldt collected wherever he travelled. Names of plants and animals are listed as if they were being stored for scientific purposes. A strong focus on size, shapes, forms, surfaces, and the visual qualities of nature is indicative of Humboldt’s aesthetics of collecting. Numeric data and taxonomies are crucial to his writing, particularly in the accompanying footnotes that extend over numerous pages. But apart from this, his vision of connectedness depends equally on the reader’s imagination, as Bettina Heyl (2007, p. 216) points out. Rather than delivering actual scientific evidence “von dem Zusammenwirken der Kräfte” (2004, p. 7) / “of the cooperation of forces” (2014, p. 25), Humboldt asserts a vision of global correspondences that he could not yet fully prove. Instead he employs various rhetorical and narratological devices to achieve his goal of providing an “Überblick der Natur im großen” (2004, p. 7) / “far-reaching overview of Nature” (2014, p. 25). Michael Bies’ (2012) claim that natural scientists around 1800 often made use of depiction techniques and thereby filled gaps in empirical knowledge with aesthetic knowledge is certainly true for Humboldt.

His rather extensive use of similes and metaphors must be obvious even to cursory readers. When contemplating the natural world he frequently describes it as an externality best to be contemplated from a distance. In the course of writing he employs corporeal metaphors. Secondly, he stages global connectedness by comparing different landscapes, animals, and plants. By setting them in relation to each other, he establishes correspondences. Leaping from one region to another, he points out resemblances and creates a global vision. And thirdly, Humboldt enhances the ties between local and global contexts by using sudden shifts in scale. Many of his

essays depict a particular stretch of land only to then pull back out and deliver a greater picture. Instead of aiming directly for the whole of nature, he starts with a detail and, zooming out of this description makes us see the whole globe. The essay's open, digressive form enables Humboldt to constantly shift between the particular and the general, the local and the global sphere. In the next part of this chapter, I will show how Humboldt's vision of global connectedness is reflected in particular descriptions he gives of nature.

Humboldt's essays often start in the manner of travel writing: with a European wanderer in a foreign landscape. From the point of view of a first-person narrator, he describes a journey on a river, the nocturnal jungle or a mountain peak. But after a couple of paragraphs, the text deviates from the narrative or descriptive pattern of the travelogue. It pauses; it provides scientific measurements; or it abstracts from an observation to arrive at a more general conclusion. Most frequently it establishes analogies between different localities. The end-point of this motion of zooming out of a specific locality is an extra-terrestrial point of view. Humboldt repeatedly describes the Earth as if looking at it from a great distance or height. This is also the case in his essay *Ideen zu einer Physiognomik der Gewächse*, which discusses global plant distribution. The essay opens with a memory. Humboldt remembers looking at insects, which airflows had driven towards the peak of Mount Chimborazo:

Am Chimborazo, fast achttausend Fuß höher als der Ätna, sahen wir Schmetterlinge und andere geflügelte Insecten. Wenn auch, von senkrechten Luftströmen getrieben, sie sich dahin als Fremdlinge verirrt, wohin unruhige Forschgier des Menschen sorgsame Schritte leitet, so beweist ihr Dasein doch, daß die biegsamere animalische Schöpfung ausdauert, wo die vegetabilische längst ihre Grenze erreicht hat. (2004, p. 237)

On Chimborazo, nearly eight thousand feet higher than Aetna, we saw butterflies and other winged insects. Even if, driven by vertical air currents, they had merely gone astray to such places as the restive thirst for discovery had led the tentative footsteps of humans, their presence there still demonstrates that the more adaptable nature of animals endures where vegetation has long since met its limits. (2014, p. 155)

After mentioning their location, Humboldt's narrator immediately compares the height of the Ecuadorian mountain to that of Mount Etna on Sicily, forging thus a correspondence between South American and European geology. Humboldt looks for diversity and finds traces of life everywhere. He is both overwhelmed with awe and fascinated by manifoldness. As a scientist he tries to figure out the underlying order that unites heterogeneous elements to form what we would call today an ecosystem. Standing on top of the mountain, the invisible power of life is evoked by an

imagery of transparency as the narrator mentions the atmosphere, airflows, microorganisms, and dust. At this moment, Humboldt's essayistic subject speaker does not collect, but his writing stores the findings nonetheless. He resembles an 'Über-scientist' whose gaze protrudes even into the hardly visible sphere of micro-organisms and dust. Applying the aesthetics of collecting, he notes: "Räderthiere, Brachionen und eine Schaar microscopischer Geschöpfe heben die Winde aus den trocknenden Gewässern empor." (2004, p. 238) / "[r]otifers, brachioni, and a host of microscopic creatures that are lifted by the winds from drying waters." (2014, p. 155)

In the following passage the narrator traces the movements of air streams. He argues that the interaction between plants, animals, humans, and atmospheric dynamics have shaped the planet's surface, and proves this reasoning by following the way tiny spores take towards far off islands. This movement through space happens to the effect that his role as conductor of essayistic movements seems to be handed over to the wind, counteracting his role as a scientist in control. The perspective infuses a sense of being carried away by natural forces. In addition, the dynamics of a nature exuberant in vital energy is also transmitted through the essay's meanderings. Hartmut Böhme (2001, p. 24) goes even so far as to argue that the essay's digressions generate a structure which functions as mimesis of nature's interconnectedness. Instead of confronting the reader with fixed results, Humboldt's narrator uses digressions to transmit a sense of exploring, the open form of the essay matching his curiosity. Part of the aesthetic appeal of reading the *Ansichten* is that they give you a sense of bearing witness to the evolution of thought in writing. Sudden hermeneutic breaks make the process of thinking transparent and indicate movements through space while the essayistic subject is collecting, measuring, and reflecting. Sabine Wilke (2010) describes this as performative writing because it recreates experiences for the reader. At one instant, we accompany Humboldt's narrator on top of mount Chimborazo, the next moment he describes witnessing the phosphorescent light produced by tiny insects, "gallertartige Seegewürme" (2004, p. 240) / "gelatinelike sea microbes", which turns the ocean's ground into a "Feuermeer" / "sea of fire" (2014, p. 157), taking us from the highest point on Earth downwards.

By following the motion of airstreams, Humboldt's narrator shifts the focus from Mount Chimborazo to different landscapes. The text alternates between descriptions of scarcely vegetated and richly flourishing landscapes. Drawing on a meta-

phor of weaving, the text's meanderings peak in an observation on the distribution of plants:

Ungleich ist der Teppich gewebt, welchen die blüthenreiche Flora über den nackten Erdkörper ausbreitet: dichter, wo die Sonne höher an dem nie bewölkten Himmel emporsteigt; lockerer gegen die trägen Pole hin, wo der wiederkehrende Frost bald die entwickelte Knospe tödtet, bald die reifende Frucht erhascht. (2004, p. 241)

This carpet spread by the blossom-rich flora over the naked body of the Earth is woven in varying ways: thicker where the sun climbs higher in the ever-cloudless sky, sparser toward the slow-moving poles, where the returning frost sometimes kills the grown buds or catches the ripening fruit. (2014, p. 157)

Humboldt's narrator frames the planet Earth in this passage through a macroscopic perspective. He depicts it in terms of a united body, a rhetorical treatment that was later adopted by the British scientist James Lovelock (cf. 1995) when he came up with his Gaia theory that relies on corporeal imagery as it depicts the planet Earth as a self-regulating superorganism. By employing the metaphor of a "naked body" Humboldt imagines the planet as a single living organism and, at the same time, makes the global sphere accessible to the reader by translating it into familiar images. But the metaphors of the naked body and the carpet are more than vivid pictures. They also keep available an interdiscursive truth as they describe the ecological function of the plant cover: to protect the soil from sunlight and rain. The passage previously quoted is remarkable in that it establishes a connection between the climate – heat and cold are contrasted – and the distribution of plants. The strong focus on the adaptiveness of plants explains why *On the Physiognomy of Plants* is considered to be one of his most important essays. In footnote 13 Humboldt explicitly discusses the process of evolution and comes close to anticipating Darwinian thought (see Dassow Walls/Jackson/Person, 2014, p. 8).

Warmth and water determine the aspect of a landscape because they let plants flourish. This fundamental insight helped Humboldt to re-imagine the planet and its surrounding atmosphere as dynamic interacting entities. While climbing Mount Chimborazo, he had collected plant samples that demonstrated the impact of altitude and climate on the distribution of plant species. The colder it got, the fewer plants he counted. This finding was the basis of his theory of geobotanical interdependencies. Humboldt saw plants no longer solely through the lens of established classification schemes, but as types dependent on their climate and location. He used techniques of collection in order to arrive at connections. Instead of placing them merely in a taxonomic system, he observed the influence of a geographic space on the vegetation.

The plant cover of a landscape, in his eyes, was determined by global phenomena, notably climate.

This shows how Humboldt constantly weaves together the separate strands of vegetation patterns, climate, and aesthetics into a whole, making use of the essay's transdisciplinary take on knowledge. By contemplating the planet from a distance, it becomes possible to understand the mechanisms of geobotany. To see or imagine the Earth in its entirety is a necessary precondition. Humboldt states that

[w]er demnach die Natur mit Einem Blick zu umfassen, und von Local-Phänomenen zu abstrahiren weiß, der sieht, wie mit Zunahme der belebenden Wärme, von den Polen zum Äquator hin, sich auch allmählich organische Kraft und Lebensfülle vermehren. (2004, p. 245)

whoever is able to comprehend Nature with a single look and knows to abstract localized phenomena will see how, with the increase in invigorating heat from the poles to the equator, there is also a gradual increase in organic power and abundance of life. (2014, p. 159)

Humboldt's narrator generally emphasises the sense of vision. Vision is central to his awareness of differences and correspondences in nature. He seeks them out because they allow him to postulate universal laws of nature. By way of comparison, the essay juxtaposes different local spheres and creates the impression of a greater ecological network structure.

The comparative mode of *Ansichten* is also central to its environmental impetus. Comparisons allow Humboldt to suggest that deforestation, for instance, can alter a region's micro-climate. He explains that the variety of plants in equatorial South America is nourished by the region's hot humid climate. It abounds in water, which is the necessary precondition of all existence. Looking back at European history, Humboldt points out that very hot regions, such as Spain or the coastal parts of northern Africa, were not always barren and dry. Heat, therefore, cannot be considered to be generally hostile to the development of vegetation:

man vergißt, daß das südliche Europa eine andere Gestalt hatte, als pelasgische oder karthagische Pflanzvölker sich zuerst darin festsetzten; man vergißt, daß frühere Bildung des Menschengeschlechts die Waldungen verdrängt und daß der umschaffende Geist der Nationen der Erde allmählich den Schmuck raubt [...] (2004, p. 243).

one forgets that Southern Europe had a different appearance when agrarian Pelasgic or Carthaginian peoples first gathered there; one forgets that early civilization pushed back the forests, and that the drive of nations to re-create has gradually robbed the Earth of the sylvan adornment [...] (2014, p. 158).

The historical perspective infuses a sense of ecological awareness as the focus shifts to the changing aspects of nature due to different human habits of using natural resources. It is not necessarily heat that causes desertification, but deforestation.

Holding the belief that the advancement of human culture often involves the decay or destruction of natural vegetation, Humboldt’s narrator explains that early human civilizations in Southern Europe “pushed back the forests” and destroyed the original ecosystem. At another point he therefore stresses the positive impact of the absence of a human’s “zerstörende Hand” (2004, p. 217) / “destructive hand” (2014, p. 142) on plant growth and animal life in the primeval forests along the river Orinoco, arguing that South American landscapes continue to be a “wilder Schauplatz des freien Thier- und Pflanzenlebens” (2004, p. 20) / “wild showplace of free animal and plant life” (2014, p. 32). Ecological interconnections help to spread organic life around the planet, but they also make environments vulnerable to human exploitation. By imbedding his observations on deserts into a greater historical panorama, Humboldt phrases an ethical warning. If humans continue to exploit tropical regions they might alter their structure and outward appearance, turning them into desert landscapes as happened many centuries ago with Southern Europe. So, on the one hand Humboldt describes natural history as a self-regulatory, ecological process (see Böhme 2002b, p. 503); and on the other hand he already points to the force of human impact. Humans are one of the most powerful players in this system and therefore have a particular responsibility to protect the diversity of flourishing life.

To read *Ansichten* as an essay cycle enables us to better understand the epistemological capacities of these texts. The essay as a hybrid genre that crosses the disciplinary boundaries of modern science suited Humboldt’s holist approach to nature. Instead of constraining himself to one field of knowledge, we have seen how he steers in multiple directions. The discursive openness of the essay form generates a unique capacity to get a grasp of the complex entanglement in which different life forces shape this planet. Humboldt’s passion for collections was driven by a longing to connect what he collected in order to understand the whole. In times of global warming and mass extinction, his writing has re-gained its appeal. Today we look at his essays and find a decidedly modern, far-sighted thinker looking back at us.

Ernst Jünger, *Subtile Jagden*

Ernst Jünger's gaze at nature and eventually at us as readers is a quite different one. While the twentieth-century writer shares with Humboldt similar aesthetic strategies as he establishes analogies and correspondences in writing, his is a more personal take on environments around the globe. When Jünger discovered his passion for 'Naturkunde'⁴ more than 100 years after Humboldt's South American journey, natural history had passed its prime as a scientific discipline. Between 1923 and 1926, Jünger had studied natural sciences in Leipzig, worked at Anton Dohrn's Stazione Zoologica di Napoli and been registered as a Ph.D. candidate in Leipzig before dropping out of university, in order to pursue a literary career. Despite his familiarity with modern research cultures, he felt more indebted to the Linnaean tradition of eighteenth-century naturalist collectors and early nineteenth-century scientific holists (see Zissler, 1990, p. 126; Pedersen, 2012, pp. 120, 126). This life-long affinity for natural history found expression particularly in the realm of entomology, the exploration of insect life. Jünger contributed a number of specialist articles to the scientific journal *Entomologische Blätter*; several species were named after him;⁵ and his estate in Wilflingen contains a vast collection of approximately 40 000 insect specimens (cf. Jünger, 2010, p. 464), matched among writers only by those of Vladimir Nabokov and Maurice Maeterlinck. But Jünger's interest in entomology has also informed his literary output. In his 1939 novel *Auf den Marmorklippen* (*On the Marble Cliffs*), widely read as an allegory of Nazi barbarism, natural history in the Linnaean tradition as practised by a group of botanists functions as a means to oppose totalitarianism. In this work, the practice of collecting fuels the allegorical plot, whereas in *Subtile Jagden* (*Subtle Hunting*), the later collection of personal essays, it is *the* major theme.

The thirty-one individual essays that make up the 270 pages of this 1967⁶ volume revolve around Jünger's relationship with insects, focussing in particular on ground beetles (*Carabus*), common tiger beetles (*Cicindela*), and blister beetles (*Mylabris*). The title *Subtile Jagden* ironically refers to the caution required of the naturalist when pursuing and collecting insects. These subtle hunts are linked to locations closely connected to Jünger's own biography (Goslar, Berlin, and Rehburg are

⁴ The German language does not have a direct equivalent of the term 'natural history', but the idea is best captured by the category 'Naturkunde', which Jünger himself uses.

⁵ For a list of Jünger's entomological articles and the species named after him see Mühleisen, 1996, pp. 162-170.

⁶ Some of the essays are based on notes taken as early as 1938 (cf. Bühler, 2014, p. 232).

mentioned, but also the trenches in which he fought in the First World War) and to areas which are particularly rich in natural splendour, like the Amazon region, Sardinia, and Manila. Like Humboldt, Jünger filters empirical information through the perception of his essayistic subject speaker, who establishes correspondences between his entomological findings, but *Subtile Jagden* does not lay claim to advance scientific knowledge. It is a more personal and less influential book than *Ansichten*, asserting connections and correspondences more freely. Where Humboldt collects specimens and gathers data as he asserts correspondences by referring to empirical measurements, Jünger foregrounds visual analogies and memories. Essayistic digressions allow Jünger's narrator to constitute a mimetic structure which illustrates the process of remembering, as names seem to be indeed capable of setting in motion a chain of wide ranging associations, often resulting in sudden changes of discourse. The aesthetics of the personal essay manifests itself most notably in the way in which descriptions of individual bugs through associations are set in relation with other observations and souvenirs of the past.

Although *Subtile Jagden* begins with a Rehburg childhood memory, there is no straight progression through time and no unity of place (see Hoorn, 2016, p. 235). Instead, Jünger's narrator arranges his material through wide-ranging chains of associative links, as is typical of the essay genre. Insects occupy a double function: they are on the one hand real, zoological objects which are described, observed and classified, and on the other they tie in with mythological and historical reflections, memories of journeys, books, and wars that help Jünger to reconstruct scenes of autobiographical significance. Benjamin Bühler (2014, p. 232), therefore, argues that *Subtile Jagden* can be read in the tradition of Jacques Derrida's "zoo-auto-bio-bibliography" as a literary autobiographical insectarium. In *Subtile Jagden* Jünger does not attempt a systematic scrutiny of insects, as in ethological research: he is more interested in the experience of observing, possessing and naming them (see Hoorn, 2016, p. 226). In the very first chapter, his narrator notes:

Die große Zeit für solche Neigungen war schon vorbei. Die eigentliche Naturkunde, das liebevolle Betrachten von Objekten, galt kaum noch als Wissenschaft. Dem Behagen an der Anschauung war der Genuß an der exakten, gezielten und messenden Beobachtung gefolgt.

The prime of such penchants was over. The actual knowledge of nature, the affectionate observation of objects did no longer count as science. The pleasure of visual perception was superseded by the indulgence in exact, targeted and measuring observation. (Jünger, 1980, p. 11. All translations are my own.)

A sense of nostalgia pervades as Jünger's essayistic speaker subject mourns the substitution of the older naturalist tradition by the exactitude of new methodologies. Entomology can seem like a journey through time, in which not only past memories are evoked, but also preceding naturalists. The volume ends with *Bunter Staub* (*Colourful Dust*), an essay that describes a visit to Jean-Henri Fabre's house in Sérignan, where Jünger's narrator gazes at the French entomologist's desk and his insect collection, and reflects on the traces which the passing of time has left on collected items (cf. *ibid.*, p. 54).⁷ At other points, he mentions Linnaeus, Goethe, Alexander von Humboldt, and Alfred Russel Wallace (Jünger, 1980, pp. 32-33), who are pivotal to nature essay discourse, and remembers his habit of visiting the herbal collections of Adelbert von Chamisso and Jean-Jacques Rousseau in Berlin, which were later destroyed in the air raids (*ibid.*, chap. *Steglitz*). Although literary criticism has not yet determined the importance of such an international network of nature essayists, who refer to each other regardless of linguistic boundaries, awareness of this tradition obviously matters to Jünger who must be regarded as both a writer *and* an entomologist (see Gorenstein, 2015).

At several points, Jünger's narrator distinguishes his approach from that of modern science. Alluding to Max Weber, he speaks out against the scientific "disenchantment" of the world, searching in literature for alternative modes of appreciation (see Meyer, 1990, p. 562). In the chapter *Sammler und Systematiker* (*Collectors and Taxonomists*), he even goes so far as to link the "messenden, quantifizierenden, statistischen Absichten" / "measuring, quantifying, statistical intentions" (Jünger, 1980, p. 114) of science to environmental destruction. For the sake of a flourishing economy, modern biologists might be tempted to develop stronger insecticides, instead of considering what is best for nature:

So kommt es zur Figur des Forschers, der auf immer schärfere Gifte und auf deren Ausbreitung über immer größere Flächen sinnt. [...] [E]s ist kein Zufall, daß mir die Methodik während des ersten Gasangriffes, den ich erlebte, zum Bewußtsein kam. Wir waren durch die Masken ziemlich geschützt, aber die Gräben waren von sterbenden Tieren, besonders von solchen mit empfindlicher Epidermis, erfüllt.

This is how the character of the scientist who aims for ever stronger poisons and for their distribution over ever-growing areas emerges. [...] [I]t is no coincidence that the methodology became conscious to me during the first poison gas attack that I experienced. We were fairly protected by masks, but the trenches were full of dying animals, particularly in those with a sensitive epidermis. (*Ibid.*, p. 116)

⁷ On links between Jünger's epistemology and Fabre's writing see Wulffen 2011, p. 58.

In this passage, the narrator links modern warfare to the development of insecticides. Apart from sharing the vulnerability of animals, he also uses this scene to argue in favour of the somehow nobler form of hunting, undertaken by entomologists, as opposed to the cold mechanical rigour of toxic gas linked to modern science. While Jünger is not opposed to war as such, he condemns forms of warfare which preclude bravery, skill and self-sacrifice. The traditional soldier, in this respect, equals the entomologist.

Little research on *Subtile Jagden* has been carried out so far, but when Jünger's interest in the natural world has been discussed, the analysis has rarely focussed on his ecological awareness, which is explicit in warnings of deforestation, discussion of the destructive consequences of insecticides (see for instance 1980, pp. 115-116), and hints at the increasing loss of species. Instead, criticism tends to focus on Jünger as a public person and political writer. Born in Heidelberg in 1895, Jünger lived for almost the entire twentieth century. Until his death shortly before his 103rd birthday he remained a controversial, yet canonised German author, with a reputation that results most notably from his early writings, which are driven by a rigorously anti-democratic attitude towards the Weimar Republic while celebrating a soldier's virtues such as discipline, bravery in the field, and a manly thirst for adventure. The fact that the recipient of multiple awards for bravery in the First World War went on to serve as a captain in Hitler's Wehrmacht in Paris in the Second gained him the reputation of being an enthusiastic warmonger and if not a Nazi sympathiser then at least their ideological predecessor.⁸ After 1945, Jünger retreated from public life. He was first banned from publishing (1945-1949) because he refused to fill out the denazification questionnaire. Later, he chose to write about entomology rather than condemning Nazi terror openly.⁹ Jünger has been much criticised, and justly, for adhering to a position one could see as a strange disjunction or displacement from the political and social realities of our planet.¹⁰ To understand him as the prototype of early twentieth-century conservative environmentalism, a man who approached the American marine biologist Rachel Carson ten years before her highly influential popular science book

⁸ Historian Allan Mitchell (2011) recently called Jünger "the devil's captain" in accordance with the leitmotif of Carl Zuckmayer's popular play *Des Teufels General*, which deals with a young general, struggling between the temptations of Nazism and the moral obligation to take part in the resistance movement.

⁹ Arguing in favour of new research perspectives, Matthias Schöning and Ingo Stöckmann (see 2012, p. 5) point out that Jünger's relation to the National Socialists is not a topic he himself brings up much, but is rather a product of his critics.

¹⁰ The philosopher Hans Blumenberg (see 2007, p. 124) for instance points to Jünger's stylistic Mannerism and refers to his unworldliness.

Silent Spring was published in 1962 (see Gorenstein, 2015, p. 187), and argued vehemently against the use of pesticides, adds a new dimension to this image, and demands a preparedness to accept seemingly diametrically opposed qualities in a single person. It necessitates a re-evaluation of Jünger, recognising he was a nature essayist and a member of international networks, in which writers and what we would nowadays call ‘citizen scientists’ combined literary and scientific techniques of recording the natural world.

Following in the footsteps of Humboldt’s writing, *Subtile Jagden* seeks to continue the tradition of the great interconnected panoramas of *Ansichten*, but its subject speaker is repeatedly confronted with a world that lacks the pristine landscapes of South American nature. Jünger’s narrator arrives in these ecosystems as “a second Humboldt” (Pschera, 2008, p. 11) who registers processes of urbanisation, transformation and destruction. I will now single out one essay as an example for the ways in which Jünger’s aesthetics of collecting serves as a practice in which personal memories, ecological criticism, and encyclopaedic longing intersect.

The chapter *Goslar am Harz* takes us back to 1933 – the year when the author moved from Berlin to the country. Before, the Nazis had offered Jünger a seat in the Reichstag in 1927 (which he declined), and elected him a member of the nazified Deutsche Akademie in 1933 (a post which he also declined), and the secret police Gestapo had searched his Berlin flat (cf. Arnold, 1990), yet none of these incidents is mentioned in *Subtile Jagden*. Jünger rather focusses on natural history instead, underscoring his reluctance to face political realities. Goslar is a bastion of timelessness and tranquility that seems far removed from the approaching war. The entomological community is evoked as a congregation, founded two hundred years ago by Carl Linnaeus, which has “ihre Kirchenväter, ihre Dogmatiker, ihre dienenden Brüder, auch ihre Märtyrer“ / “its own church fathers, its dogmatists, its serving brothers, even its martyrs” (Jünger, 1980, p. 161). In comparing entomologists in small towns like Goslar to “hermits”, who serve the greater purposes of the naturalist congregation, Jünger elevates the practice of collecting into a mystical-religious sphere, without diminishing the encyclopaedic goal.

Goslar am Harz describes several excursions together with a well-known local entomologist, the headmaster of a local school. It is winter as they head off for the Grauhöfer forest. When Jünger was writing *Subtile Jagden* this forest already had been replaced by an airfield, as his narrator points out. The retrospective mode in-

fuses a sense of ecological consciousness as it showcases how areas of land are quickly changing when the original growth vanishes and space is occupied according to human needs. But Jünger still remembers Goslar vividly as it used to be at the time when he was engaged rather ironically as the headmaster’s “Gehilfe” (ibid., p. 162), his “assistant”, in a project to itemize the local fauna of the Goslar region. This project is reminiscent of Rousseau’s vision of botanizing St. Peter’s Island in the *Rêveries* in that it takes place within a circumscribed locality. By describing the specific setting and indicating the weather conditions, Jünger’s narrator reveals his deep rootedness in this environment. He lists the individual steps of collecting, culminating in the encounter with a living insect.

Through description techniques Jünger invests his collection with an active agent quality. The bugs seemingly set in motion the digressive movements of essay writing as they provoke sudden epiphanic memories which lead us away from the original place of discovery. Individual collected insects function as “mnemotechnische Fixpunkte” (mnemotechnical benchmarks), as Tanja van Hoorn calls them (2016, p. 249). Beetles are nuclei of personal memories, which lead into a much wider web of interconnections where zoological information, metaphysical meanings and autobiographical memories are interwoven. When his narrator contemplates a rare blue beetle called “blaue Drypta”, which the headmaster had once given to him, he is reminded of both Goslar and an attack by foreign fighter bombers in the last months of World War II during which he had seen the same beetle. Intensive light accompanies this memory: “ein blauer Funke übersprang die Zeit” / “a blue spark leaped across time” (Jünger, 1980, p. 172). The collected bug is a representative of its species, but its name is also equipped with the power to trigger wide-ranging chains of memory:

Zehntausend lateinische Namen, jeder für sich bedeutend, bilden zugleich ein Netz von blitzenden Häkchen für die Erinnerung.

Ten thousand names in Latin, each in itself meaningful, form at the same time a mesh of tiny sparkling hooks for memory. (Ibid., p. 171)

Moments of discovery are evocative of Benjamin’s understanding that collected objects and information about them, such as the locations where the objects were acquired, “come together, for the true collector, in every single one of his possessions, to form a whole magic encyclopedia” (1999, p. 207). Benjamin alludes to the collector’s longing for encyclopaedic completion, which can in fact never be obtained. Dissolution and absence are mourned and determine the collector’s longing to recreate or

re-imagine wholeness through the practice of collecting. The idea of a collectable totality which provokes mystical feelings has a strong religious dimension. Benjamin introduces the term "Bezauberung" (1991, p. 271) – enchantment – to describe the positive feelings that accompany the incorporation of a new item into the collection, an experience that Jünger's narrator repeatedly evokes through colour adjectives and light imagery. When the headmaster leads him into a snowy part of the forest where they search for hibernating insects, he experiences such a moment of enchantment:

Der Rektor führte mich in einen verschneiten Bestand von Ahornen; er wollte der Gesellschaft nachspüren, die dort überwinterte. [...] Oft konnte ich, wenn ich ein Stück Rinde in der Hand hielt, die lebende und die tote Materie nicht unterscheiden; wenn sich dann ein Fühlerchen regte, war es, als ob ein warmes Licht sich entzündete.

The headmaster led me into a population of maple trees covered in snow; he wanted to trace the society hibernating there. [...] Quite frequently, I was unable to distinguish between living and dead matter as I held a piece of bark in my hands; when a tiny antenna stirred it was as if a warm light was inflamed. (Jünger, 1980, p. 162)

Instead of mentioning the taxonomic name of the insect present, experience takes centre stage in this passage. The timid movements of insect antennas are depicted in terms of an epiphanic revelation. To find an insect when one does not expect it is the greatest pleasure, Jünger's narrator claims slightly later, echoing Benjamin's vision of enchantment:

Sprühlichter im Schaum der Fahrten, denn jeder Glücksfund ist nur ein Gleichnis, ein Versprechen des Glücks überhaupt. Ein Spiel mit Nüssen um unbekannte Einsätze.

Spraying lights in the foam of journeys, because every chance discovery is only a symbol, a promise of absolute happiness. A game with nuts in which the stakes are unknown. (Ibid., p. 174)

Every collected item is a promise of the whole which can never be reached. In combining personal memories with the ordering movements of the insect collector Jünger forms his own aesthetics of collecting. In collecting he seeks to recreate a harmony which is gone as quickly as it is perceived, leaving him in need of searching for the next insect. But the essay's subjective view from inside enables us to re-live this intimate relation with the material world. The comparison to a "spraying light" captures the sensation of harmony, a temporary elevation, as it makes the invisible – the strong feeling the insect provokes – visible for us, the readers. Gunther Martens, therefore, aligns *Subtile Jagden* with a phenomenological experience of the world, arguing that the subtle hunt represents a type of experience of the world which is characterized by

fusion with and participation in nature (see 2012, p. 154). And it is certainly true that Jünger’s writing is driven by a profound desire for such moments of fusion.

In the Linnaean classification scheme, the connection between collector and item becomes apparent in the designation of the ‘discovered’ new species. It features its collector’s name as one part of its binary name, a convention prompting Jünger to describe the act of naming slightly ironically as a “triumph” of every entomologist. In the chapter *Antaeus*, he states that a successful description culminates in the act of baptizing, when a new name is included in “Linnés großes Jagdbuch” / “Linnaeus’ great book of hunting” (Jünger, 1980, p. 29). Although most naturalist collectors are aware that their collections could be endlessly expanded – a fact that Charles Darwin proved when he demonstrated that species change over the course of time and so does the number of collectable natural items – a quest for unity is at least implicit in every collector’s struggle with gaps in her or his collection. To acknowledge that species become extinct, and new ones emerge interferes with the belief in a complete collection and it therefore does not come as a surprise that Linnaeus is mentioned more often in *Subtile Jagden* than Darwin. “Durch die neuen Theorien wird die Natur vergeistigt, dynamisch, anonym” / “The new theories intellectualize, dynamise, and anonymise nature” (ibid., p. 110), his narrator laments with regard to Darwin’s vision of evolution in *Sammler und Systematiker*. For Jünger’s essayistic speaker subject, entomological collections provide a counter-tradition of nature appreciation and firm orders which he attempts to continue in writing while disregarding their outdatedness.

Affectionate observations, to use his own phrase, usually occur as oscillations between the outbound, descriptive mode and the level of introspection. Jünger’s narrator describes, for instance, the colours of insect shells with respect to their effect on the human observer, deviating from the Darwinian interpretation of animal colour as part of their adaptive performance (see Gorenstein, 2015, p. 172). The diversity of colour adjectives in *Subtile Jagden* is striking, and goes far beyond the usual amount of information any specialist would need as diagnostic features. Bugs, butterflies, and caterpillars are “seidengrün”, “leuchtendgelb”, “goldschwürig”, “metallgrün”, “graugrün”, “sammetbraun”, “filzig weiß”, “rotbraun”, and “aschblau”. The focus on colours accords with the aesthetics of collecting: it allows Jünger to showcase nature’s diversity in writing, as he adds further nuances to the common entomological denominations. Most of the colours are invented: Jünger creates new compound words.

These consist typically of an actual colour, like 'green', 'yellow' or 'white', which is either combined with another colour or a word from a totally different lexical field, such as 'silk' or 'metal'. This second word expands the colour's meaning. In particular the use of the word 'gold' attributes a value to the insect world that is both symbolic and economic, thus matching Jünger's fondness of depicting bugs as hidden gemstones. Colours underscore the insect's charisma, its beauty and attraction for the entomologist and enhance thereby its meaning for the speaking subject. The essayistic narrator acts as a director of the text who unfolds the hidden meanings of nature, as he describes aesthetic correspondences that connect beetles, humans, and landscapes around the globe because they are all determined by the same "Kraft der Territorien" / "force of territories" (Jünger, 1980, p. 32).

In other cases, specific objects trigger the associative chains. Contemplating the tool used by the headmaster to catch insects ("den Glaskolben mit zwei Gummischläuchen" / "the glass flask with two rubber hoses", *ibid.*, pp. 165-166), Jünger's narrator is reminded of an entomological journey from Marbella to Egypt where he would use the same tool to trace similar species. These global ties are asserted in writing, but there is no scientific proof of them. It all goes back to the totalising interpretation of the human subject speaker and it is no coincidence that Jünger in this context refers to an expression of the German romanticist Novalis when he points to "das in den Geheimnisstand erhöhte Leben" (*ibid.*, p. 62), the deep secret of life. *Subtile Jagden* performs the global distribution of insects by leaping from one place of discovery to the next. This happens to the effect that the essayistic narrator experiences a hidden unity as he understands bugs as ciphers of a secret universal "Schriftbild der Natur" / "typeface of nature" (*ibid.*, p. 32).

In line with Humboldt's geobotanical reflections, Jünger hints at the greater variety of plants to be found in hot climates, which makes these countries attractive destinations. When he describes a journey to Egypt, Jünger's essayistic speaker finds, however, that it is by no means an untouched paradise. The region has already been conquered by mass tourism. A very hot day is spent to the astonishment of other guests with a subtle hunt in the hotel garden. Jünger's narrator notices the lack of biodiversity, as he encounters only very common species. When he sees the gardener spraying pesticides on the hedges, he comments:

Wo ich von zehntausend einen als Tribut nahm, hielt er es umgekehrt; er ließ höchstens einen davonkommen. Da regt sich kein Beinchen mehr. Und das unter allgemeiner Zustimmung.

Where I took one out of ten-thousand as tribute, he did the reverse; he would let no more than one escape. None of the little legs stirs anymore. And this amidst universal approval. (Ibid., p. 168)

Jünger contrasts the use of pesticides, which he criticises from a standpoint approaching environmentalism, with the comparatively sustainable killing of the entomologist. The latter, a practice he has made a habit of, prompts an American tourist to express her disapproval while the modern gardener’s mass-killing goes unnoticed. In this brief exchange the double standards of so-called nature lovers are revealed. Although Benjamin Bühler notes that Jünger avoids pointing to the actual need to kill insects in order to ‘collect’ them – Bühler calls this the subtle hunt’s “blind spot” (2014, p. 233) – the term ‘hunt’ leaves no doubt about the actual killing. The self-reflectiveness of the essay genre enables Jünger to discuss this problem at several points throughout the collection. While roaming through the forests of Goslar, his narrator explains that he and the schoolmaster share a professional moral codex, what Jünger calls “waidgerecht verfahren” (1980, p. 165). The concept of the subtle hunt remains within the realm of a self-aware encounter with nature, as it includes the self-commitment not to kill/collect more specimens than required. In addition, both refrain from making use of instruments which would help them to catch more insects than mere luck would allow them. If mere quantity became decisive, as in unsustainable fishery, Jünger warns: “[d]ie Ziffer tritt ihre Herrschaft an”/ “numbers start to rule” (ibid.). By contrasting their ethically sound behaviour with unsustainable fishing, Jünger frames it in an environmentalist context. Where Jünger is disturbingly apolitical in other passages, his dialogue with beetles sparks a severe ecological criticism that is grounded in the conviction of the entanglement of all beings in a greater network structure. In *Schwalben* (*Swallows*) – perhaps the most explicitly ethical chapter in this volume – he mentions not only the extinction of whales, but also a Chinese village that prides itself in having killed the last fly, and comments: “Dort wird auch die Schwalbe nicht mehr sein, die früher die Luft klärte.” / “The swallow, which used to clear up the air, is also going to vanish there.” (Ibid., pp. 262-263)

Collecting for Jünger means: to reveal biographically significant connections, to add to the Linnaean *Systema Naturae*, and to counter environmental destruction with a tender immersion in the microcosm of insects, as Dan Gorenstein (cf. 2015, p. 187) observes. In this respect, Jünger’s essay writing marks a shift both from the scientific to the personal and from mere observation of ecological transformations to awareness of environmental destruction. Modified contexts of writing create altered patterns of

2. *“The Butterfly Collector”: The Encyclopaedic-Scientific Episteme*

perception. The task of the collector, Jünger’s narrator therefore points out, is to conserve: “Sammler sind Konservatoren, bewahrende und hortende Naturen” / “collectors are conservators, preserving and hoarding characters” (1980, p. 169).

2.2 Measuring and Mapping Nature in the Nineteenth Century: Henry David Thoreau's *Walden*, Alexander von Humboldt's *Über die Steppen und Wüsten*, and Domingo Faustino Sarmiento's *Facundo*

Scientific-encyclopaedic epistemologies translate not only into nature inventories, as discussed in the previous chapter's aesthetics of collecting and connecting. They also translate into measurements and mappings. Land surveying is first of all a topic, but measurements can also materialise as numerical data or feed into more general claims about the size and extent of a determined geographical formation, underlying all kinds of descriptions. Markers of geographical discourse, such as place names, directions, and spatial extensions, feature in many nature essays. Essayists go beyond a functional use of geographical data. They use measurements both to figure out the dimensions of space and to reflect on geography's limited ability to capture other, nonmaterial aspects of nature, such as experiences of sublime beauty that counter the notion of unlimited human control.

In the nineteenth century, which I am going to address in this chapter, mappings and measurements were frequently undertaken in the context of landscape planning. Many nineteenth-century naturalist explorations were in fact land surveying projects. Charles Darwin's travel journal *The Voyage of the Beagle* (1839), for instance, refers to measuring right at the beginning when he explains the purpose of his journey: "The object of the expedition was to complete the survey of Patagonia and Tierra del Fuego, commenced under Captain King in 1826 to 1830 – to survey the shores of Chile, Peru, and of some islands in the Pacific – and to carry a chain of chronometrical measurements round the world" (2009, p. 17). Both unknown and populated territories were measured in order to understand, order, and in the end control them. In line with emerging industrialized capitalism, formerly wild areas were re-landscaped both in Europe and abroad. David Blackbourn (2006) describes this process in his history of the re-landscaping of German territories around 1800. Re-landscaping projects had – and continue to have – the aim of constructing more efficient transport routes to make regions and resources more accessible. In the course, local ecosystems are significantly transformed as forests are cleared, swamps drained, and rivers rectified. This happens to devastating ecological effect.

Even though literary measurements prove to be considerably less harmful as they happen merely on paper, they can be powerful symbolic acts that influence the way people think about nature. The fact that essayists use a nonfictional genre to reflect

on nature makes their writing even more likely to be taken seriously. On the level of reflection, nature essays anticipate and contemplate ecological transformations in which the ethical impetus becomes explicit, even if they add to the discourse of surveying with their writing. I will come back to this in Chapter 4. In the present chapter I am going to discuss three essayists, all of whom, at some point in their lives, worked as land surveyors. Alexander von Humboldt spent a great deal of his South American journey measuring rivers and mountains; the American transcendentalist Henry David Thoreau surveyed Walden Pond in the winter of 1846 and included a map of it in his nature writing classic *Walden* (1854); and the writer and politician Domingo Faustino Sarmiento commissioned the first map of Argentina during his six-year term as the nation’s president from 1868 to 1874 (cf. Madan, 2011, p. 259), continuing the ongoing struggle with space that had already been prevalent in his literary opus magnum *Facundo. Civilización y barbarie* (1845). Although the ideological impetus which fuels their passion for measurements differs considerably, the act of surveying draws on an encyclopaedic-scientific view of the world. Natural space is understood to be a physical factuality that can be located, measured, and mapped.

Yet, the encyclopaedic descriptive take on nature leaves out something else that escapes the geographer’s measuring gaze. Although exterior features of landscapes can be laid out and pinned down on maps, landscapes remain unfixed places. Evanescent in all but their rock-solid foundations, their most characteristic qualities and features can be results of the interaction with the human observer’s poetic perception. Characteristics such as ‘bleak’ or ‘rich’ landscape are verbal ascriptions that interpret natural formations normatively. They frequently determine the way humans use a place. Lawrence Buell, therefore, argues that the “kind of text that emerges from the interaction between map knowledge and experiential place sense [...] can help us refine the theory of environmental nonfiction’s ‘dual accountability’ to imagination and to the object-world” (1995, p. 278). This chapter seeks to continue and expand this line of thought by demonstrating how these different instincts for firm geographical knowledge systems on the one hand and the overwhelming intensity of aesthetic perception on the other come together in a unique aesthetics of measuring and mapping nature. But what do I mean when I say ‘aesthetics of measuring and mapping’?

The creation of maps is first and foremost determined by scale and space (see Garfield, 2003, p. 17). These categories also matter for the aesthetic strategies writers

apply when they deal with space. Changes in focalization recreate the act of measuring and perceiving space, whereas changes in scale cover a range of perspectives including vast landscape panoramas, global aerial, locally rooted, and even microscopic visions. Apart from the dynamic enactment of a narrative perspective, the frequent use of geographical names, of geographical relations, and generally an emphasis on location and point of view are vital components of this aesthetics. Landscapes in nature essays are constructed through language, but they are not completely imaginary. When geographical lexemes are included they function as signals of the empirical world. Essayists use names of actually existing cities, rivers, and mountain chains which could also be found on real maps, foregrounding outer mimetic reference. One could still dip into Walden Pond, climb mount Chimborazo or marvel at the extension of the Pampas. Many people actually do this. Martin Brückner points out that while place names "allow readers to navigate the text like a map, they also function as keywords prefacing the encyclopaedic narrative of geography books." (2006, p. 144) Actual maps are thus used as source material which serves as a larger textual matrix for the landscape imaginaries developed by the authors.

Measuring as a topic in essays is often paired with an aesthetics of the sublime. While the sublime tradition has been criticised for putting human reason before non-human matter, more recent ecocriticism has re-evaluated the Kantian sublime.¹¹ Drawing on Christopher Hitt's (see 1999) notion of the 'ecological sublime', Sabine Wilke observes that what "looks like an anthropocentric principle (the human subject constructs responses to nature and is empowered by it) needs to be reenvisioned as an ecocentric principle (the subject is humbled in that encounter)." (2015, p. 45) The ecological sublime counterbalances the notion of unlimited control over space. It promotes an experience of being overwhelmed by nature's magnitude. Hitt argues

¹¹ Immanuel Kant famously determined two kinds of "das Erhabene" (1974, p. 165). Both are derived from the dynamics that spark between the human observer and her or his environment. Whereas the dynamically sublime (*das dynamisch Erhabene*) refers to an experience of nature's greatness linked to motion as in volcanic eruptions or waterfalls, the mathematically sublime (*das mathematisch Erhabene*) relies on the subject's ability to reflect on nature's magnitude. Mountains, plains, and the sea are typical topics of the mathematical sublime, which becomes visible in the eyes of the human subject. Essayistic writing lends itself to depictions of the sublime in so far as the mode of introspection allows the essayist to stage the subject's response to an overwhelmingly large nature. Kant's enlightened human beings are over-awed, but not overwhelmed or crushed. On account of the subject's intellectual capacities, vast landscapes are not necessarily experienced as a menace. Quite the opposite is in fact the case: according to Kant, humans understand their ability to reflect and reason in the face of vast natural settings by schematizing their greatness (see *ibid.*). The Kantian sublime is, accordingly, not a quality exclusively contained in the landscape itself. It rather has its origins in the realm between matter and the rationality of the human subject who perceives a particular locality that fits the purpose of an aesthetic experience (see *ibid.*, p. 166). In sublime landscape depictions the natural world is, accordingly, often presented as a force that actively shapes the human perception of it.

that the nonhuman world in the sublime can function as an “indispensable corrective of human arrogance” (1999, p. 606). He therefore emphasises the “disorienting or overwhelming confrontation with a natural object” (ibid.) that complements the ennobling feelings which Kant stresses.

In combining aesthetics of measuring and mapping with a sublime landscape imagery, the nature essay’s liminal role between science and art becomes visible again. Using sudden changes in level, nature essay writing oscillates between the modes of geographical landscape description, ecological contemplation, and subjective inwardness. Drawing on more than one episteme, essayists paint a rich, complex picture of nature. I will illustrate the functions of an aesthetics of measuring and mapping now, starting with another essay by Humboldt.

Alexander von Humboldt, *Über die Steppen und Wüsten*

Über die Steppen und Wüsten (Concerning the Steppes and Deserts), the very first text included in *Ansichten der Natur*,¹² begins with a broad landscape panorama of the great Colombian-Venezuelan plains, the Llanos, which Humboldt introduces by outlining their geographical boundaries as he indicates various names of physical locations. His reference to the cardinal direction, in particular, is typical of geographical discourse:

Wenn man die Bergtäler von Caracas und den inselreichen See Tacarigua, in dem die nahen Pisangstämme sich spiegeln, wenn man die Fluren, welche mit dem zarten und lichten Grün des tahitischen Zuckerschilfes prangen, oder den ernsten Schatten der Kakaogebüsche zurückläßt, so ruht der Blick im Süden auf Steppen, die scheinbar ansteigend, in schwindender Ferne, den Horizont begrenzen. (Humboldt, 2004, p. 15)

Upon leaving behind the valleys of Caracas and the island-rich Lake Tacarigua, which reflects in its surface the trunks of the pisang trees, leaving behind fields resplendent with the delicate light green of Tahitian sugarcane or the solemn shade of cacao plants, one’s gaze toward the South comes to rest upon steppes that, seeming to climb, dwindle into the distant horizon. (Humboldt, 2014, p. 29)

Shifting from the level of description to introspection, the perspective that opens this essay transmits a sense of the human wonder and astonishment in the presence of this flourishing landscape. It also leaves the readers under the impression of witnessing actual movement through nature, as the narrator describes how he is leaving behind

¹² For a brief overview concerning the historical context and general outline of *Ansichten* see Chapter 2.1.

the richness of Caracas' valleys. Crossing the invisible margin which separates this landscape from the barren plains, he is moving swiftly through space. The contrast between a nature of plenty and the seemingly empty space of the plains is stressed through an imagery that evokes the splendour of the *locus amoenus* and forms a counterpart to the *horror vacui* of the desert. Humboldt's narrator translates this dynamic of reduction into a narrative perspective that is driven by movement through space. Reading it today, the opening scene resembles the type of fast tracking shot which is frequently used in film. Although Humboldt wrote this, of course, many years before the invention of cinematography, geographical discourse, motion, and the visual determine the beginning of this essay and mark its way of dealing with space.

Whereas at first it remains unclear who is looking at this landscape, we learn in a second step about a proxy narrator, a wanderer, who approaches the steppes' margins. According to Mary Louise Pratt this wanderer represents no more than the "vestige of a narrative persona" (2008, p. 119). He is a type of romantic Everyman who remains anonymous all along and appears in various essays:

Aus der üppigen Fülle des organischen Lebens tritt der Wanderer betroffen an den öden Rand einer baumlosen, pflanzenarmen Wüste. Kein Hügel, keine Klippe erhebt sich inselförmig in dem unermeßlichen Raume. Nur hier und dort liegen gebrochene Flözschichten von zweihundert Quadratmeilen Oberfläche bemerkbar höher als die angrenzenden Teile. (Humboldt, 2004, p. 15)

From the luxuriant fullness of organic life, the astonished wanderer comes to the barren edge of a sparse and treeless desert. No hill, no cliff rises as an island in this incalculable space. Only broken, stratified slabs two hundred square miles in area, lying here and there, show themselves visibly higher than the parts bordering them. (Humboldt, 2014, p. 29)

This passage illustrates, once more, the hybrid character of nature essay writing. The aesthetic experience of the sublime comes together with the rigour of a scientist and is not least expanded by an ecological dimension when the wanderer shortly thereafter feels concern about the lack of trees, characterizing the desert as: "die nackte Felsrinde eines verödeten Planeten" (2004, p. 16) / "the naked rocky crust of a desolate planet" (2014, p. 29). Apart from being astonished at the sight of a seemingly dead nature, the wanderer marvels at the sheer endlessness of space. He experiences a typical moment of the mathematical sublime when contemplating the plains' extension: "Kein Hügel, keine Klippe erhebt sich inselförmig in dem unermeßlichen Raume." (2004, p. 16) / "No hill, no cliff rises as an island in this incalculable space" (2014, p. 29). Although Humboldt generally puts a strong emphasis on optical phenomena, his use of measurements and geo-historical reasoning always hint at the em-

pirical basis of his observations. By referring to numbers when he indicates the extent of stratified slabs for instance – "zweihundert Quadratmeilen Oberfläche" (2004, p. 16) / "two hundred square miles in area" (2014, p. 29) – he illustrates the fact that the Llanos' size is more than imagined: it is based on land surveying data. In contrast to the vast landscape the wanderer appears to be no more than a tiny creature. Taking into account Monika Schmitz-Emans' elucidations (see 2009, p. 4) on typical topoi of German Romanticism, individual human characters who roam vast empty landscapes without fully understanding them hint at the fact that humankind, in the end, is incapable of controlling the natural world. Space matters equally for the geographer who measures and locates it according to scientific standards and as a category which brings about the romantic sublime in the poet's eyes. It is within this binary that Humboldt's aesthetics of measuring evolves.

In the first place we see the wanderer from the exterior, almost from behind, as in the so-called 'Rückenfigur' of Romantic landscape paintings. He is standing in front of the vast plain – a similar perspective to that in Caspar David Friedrich's famous 1818 painting *Wanderer above the Sea of Fog*. Humboldt's wanderer functions as an observer and as a creature that in its smallness contrasts with the vastness of the surrounding territories. But, as focalization turns inwards, we consequently learn more about his overwhelming landscape experience. Through changes in level, Humboldt moves from the mode of description to introspection. He evokes the experience of the human watcher and reveals the romantic perception of nature:

Wenn im raschen Aufsteigen und Niedersinken die leitenden Gestirne den Saum der Ebene erleuchten; oder wenn sie zitternd ihr Bild verdoppeln in der untern Schicht der wogenden Dünste: glaubt man den küstenlosen Ocean vor sich zu sehen. Wie dieser, erfüllt die Steppe das Gemüth mit dem Gefühl der Unendlichkeit [...] (2004, pp. 15-16).

When the guiding celestial bodies in their rapid rising and setting illuminate the edge of the plain, or when they create a quivering double image of it in the lower layer of the undulating haze, one believes he sees before him the boundless ocean. Like the ocean the steppe fills the mind with the feeling of infinity [...] (2014, p. 29).

Humboldt describes how the interplay between the incidence of light, the steppe's vastness, and the gaze of the human observer creates an oceanic landscape panorama. There is no sea despite the fact that the wanderer believes he sees it. The introspection that occurs in this passage illustrates how the physical actualities of nature are metaphysically elevated in the eye of the essayistic observer. The essay genre's insistence on the perspective of its narrator turns human perception into a peculiar subject-based landscape vision. This happens in accordance with Humboldt's postulate of an

"aesthetic treatment of matters of natural history" (ibid., p. 25). As opposed to the geographical accuracy of location and measurements, the visual quality of the landscape introduces an element of liquid uncertainty into all attempts to capture it.

A further twist to this passage is added when we learn that the optical illusion is actually based on geo-historical fact: the Venezuelan steppes used to be covered by an ocean before they dried out. The maritime isotopy used in this passage echoes this fact. Later, Humboldt adds a scientific explanation for such ecological transformations, by referring to so-called natural revolutions, sudden changes in the Earth's crust. They can result in both more and less natural diversity. In the light of this knowledge Humboldt's depiction of the Llanos acquires temporal depth as it allows us to look back into the landscape's history. His focus on the visual effect of this landscape enables him to recreate its former appearance. Literature transcends time in a way a drawn map cannot. Whereas maps sketch a fixed inventory of rivers, towns, mountain chains and valleys, by freezing them at a particular moment in time, the essay's interdiscursive *ars combinatoria* together with changes in level allows the author to include memories of the past, refer to theories about future landscape changes and evoke a landscape in various time periods. Through shifts in time, essays can transmit a "sense of the environment as process rather than as a constant or a given" (1995, p. 8), which is, according to Buell, one of the characteristics of environmental literature.

Following this depiction of the Venezuelan Llanos, the text's focalization fluctuates again, as we move into global space. This spatial movement brings about a further change in levels. Claiming that "[i]n allen Zonen bietet die Natur das Phänomen dieser großen Ebenen dar" (2004, p. 16) / "[i]n all zones of the globe, Nature offers this phenomenon of immense plains" (2014, p. 29), Humboldt establishes a sudden synergy between the particular and the general as is typical of essayistic approaches to knowledge. The wanderer, to whom the text returns only few pages later, is left behind in the desert, as we follow Humboldt's narrator into the global sphere. This change in focalization happens as a zooming out, almost as if the narrator was using Google Earth. Humboldt writes that in Northern Europe one can view as steppes the "Heideländer" (2004, p. 16) / "heathlands" (2014, p. 30); he reminds us of the "Ebenen im Innern von Afrika" (2004, p. 16) / "plains of the African interior" (2014, p. 30); and he points out that thirty years after his South American journey he had the opportunity to see the Asian "Kalmücken- und Kirghisen-Steppen zwischen dem

Don, der Wolga, dem caspischen Meer und dem chinesischen Dsaisang-See" (2004, p. 18) / "Kalmykian and the Kyrgyz steppes, which lie between the Don, the Volga, the Caspian Sea, and the Chinese Lake Dsaisang" (2014, p. 31). Drawing on this comparative perspective, Humboldt discusses the landscapes' central features by explaining the climatic, geological, and geographical factors that have shaped it. Even though Humboldt hints at his role as explorer and observer, the passage's global perspective is only partially based on empirical knowledge. Having visited all places mentioned would have been impossible for a nineteenth-century naturalist. Without the help of technical innovations such as airplanes and satellite imagery, even an active traveller such as Humboldt could not have visited the European heathland, the North American, South American, African, and Asian steppes and deserts. The essay does, however, create a perspective that infuses a sense of actually being up in the air, moving above those different landscapes around the world. Before the beginning of the age of aviation and aerial observation Humboldt's narrator looks at the landscape as if he were flying. Phantasies of air travel may have infused his imagination, as ballooning became an obsession of the age after the French brothers Montgolfier launched the first manned hot air balloon flight in 1783 (see Gillispie, 1983). The essay's aerial perspective is in fact already anticipated in the title: the German preposition 'über' enables both a topical and a topographical reading. It can either mean 'on' or 'concerning' (the latter is the version Mark W. Person has opted for in the newest translation), or it could be translated as 'above' or 'over' the steppes and deserts, hinting at the possibility of movement over landscapes.

The benefit of this fluctuating point of view lies in its ability to potentially span the whole globe. Although it is nowadays a common technique of the so-called new nature writing – one thinks of Robert Macfarlane's *The Old Ways* (2012), or Tim Dee's *Four Fields* (2013) – to combine experiences of different localities, a global perspective was not a common feature of a naturalist's perspective in the nineteenth century. Michael Dettelbach points to this aspect slightly critically when he argues that the tendency to synthesize impressions of different places in Humboldt's writing has a dynamic effect, yet it lacks "the sense of personal presence or witness which lend Charles Darwin's or John Muir's landscape descriptions such vividness" (1999, pp. 493-494). And it is right that although Humboldt's narrator refers to himself as an eyewitness, he is not truly present in a determined environment. "It is at the expense of absorbing narrative and vivid description of individual landscapes that Hum-

Humboldt's comparative method enables him to represent the 'essence' of the llanos" (1990, p. 9), argues Scott Slovic with regard to *Über die Steppen und Wüsten*. The fact that sudden changes in location also serve an epistemological purpose should however not be overlooked. Moving above the earth's surface, Humboldt is able to demonstrate that deserts and plains are a universal phenomenon. He adopts the aerial perspective because he needs this point of view in order to showcase, once again, global interconnectedness.

Constant changes of focalization bring about a comparative perspective, yet they also mediate a sense of overarching control over space, anticipating one of the major innovations of web-based mapping in the twenty-first century. The ability to zoom in and out of a landscape quickly brings to mind the perspective of Google Earth, there is also a parallel in the way most users of Google Earth experience nature. Like Humboldt they are not actually present in foreign landscapes, but they do see images of them, whereas Humboldt imagines his. We experience the landscape of the Llanos through the eyes of the Romantic wanderer. He resembles Pegman, the abstract yellow figure which indicates our position on a map and which triggers off Google Street view's panorama mode when dragged onto a given street. Humboldt splits his narrative perspective into the wanderer who mediates intense landscape experiences, and his first-person narrator, who acts as scientific commentator, arguing and providing data.

Following this digression into global space, the second part of the essay is dedicated to human and nonhuman life in the steppes and deserts of Venezuela. The excursus into the global sphere is brought to an end in a typically essayistic way. Rhetorical signals mark the return to the local sphere as Humboldt's narrator, like a director of the text who decides where to cut and where to change perspective, declares: "kehren wir zu den Ebenen von Südamerika zurück" (2004, p. 20) / "we return to the plains of South America" (2014, p. 32), revealing the process-like quality of essay writing.

According to Humboldt's narrator, the Llanos have not been cultivated by humans for a long time, due to the lack of a South American pastoral and agricultural tradition, particularly among the "amerikanischen Völkerstämme" (2004, p. 26) / "the original inhabitants of the New Continent" (2014, p. 35). He is struck by the "Menschenleere" (2004, p. 27) / "the sparse presence of humanity" (2014, p. 36).

Arguing from a perspective we would nowadays call ecological, he further points to the positive impact of the absence of human cultures on the natural world:

Um so freier haben sich in ihr die Naturkräfte entwickelt: frei und nur durch sich selbst beschränkt, wie das Pflanzenleben in den Wäldern am Orinoco, wo der Hymenäe und dem riesenstämmigen Lorbeer nie die verheerende Hand des Menschen, sondern nur der üppige Andrang schlingender Gewächse droht. (2004, p. 27)

All the more freely, then, the forces of Nature manifested themselves upon the steppes in many diverse types of animal life: free and limited only by themselves, like the vegetation of the Orinoco, where the Hymenaea and the huge-trunked bay tree are never threatened by the hand of Man, but only in the luxuriant crush of entwining growth. (2014, p. 36)

Humboldt's narrator presents these landscapes as self-regulated systems unaffected by human intervention. Apart from animals, only some indigenous tribes have settled here. The Guarani, a tribe that continues to live in those regions, is sustained mainly by the fan palm, the so-called "Lebensbau[m]" / "Tree of Life" on which they build their lodgings and live "nach Art der Affen" (2004, p. 28) / "in the manner of monkeys" (2014, p. 36). Although indigenous life is portrayed as a way of cohabiting with nature without doing harm to it, it is also a form of life Humboldt clearly places low on the human scale. When he compares the Guarani to monkeys he applies the parameters of his enlightened education rather than mourning the lost paradise Rousseau evoked in his praise of the 'bon sauvage' in the *Second Discourse* (*Discours sur l'origine et les fondements de l'inégalité parmi les hommes*, 1755). Humboldt further writes that only "[s]eit der Entdeckung des Neuen Continents sind die Ebenen (Llanos) dem Menschen bewohnbar geworden" (2004, p. 29) / "[s]ince the discovery of the New Continent, the Llanos have become inhabitable to humans" (2014, p. 37), making it sound as if the Guarani were not proper inhabitants. This assertion implies a hierarchical order and a concept of dwelling that is based on the notion that in order to become "inhabitable" nature needs to be re-landscaped and cultivated.

The steppes and deserts present themselves to Humboldt's narrator as "pure' nature", a "primitive eco-system" (2015, pp. 88-89), as Sabine Wilke points out. She further explains that this is a typical illusion of nature writing and one that might particularly apply to the type of nature essay occupied with measuring and mapping. For it is unexplored and uninhabited space that attracts surveyors most. Humboldt's use of the aesthetics of measuring and mapping also has to be read in this context. It should, however, not be overlooked that Humboldt was fascinated by indigenous knowledge of the natural world, by the worshipping of plants and animals by the native peoples, and sought to learn from them. He was also an active promoter of

egalitarian human rights who vehemently argued against slavery, criticising the barbarism of missionaries and colonists.¹³

When Humboldt points to the development of a basic infrastructure he argues not so much as a naturalist, influenced by German Romanticism, but rather from the perspective of an enlightened European statesman who received educational training in the mining industry and for whom transforming wildness into a cultivated space is a necessary and desirable step towards modernity. Noting both the sublime character of this landscape and emerging forms of cultivation, his narrator points out rather approvingly:

Um den Verkehr zwischen der Küste und Guyana (dem Orinoco-Lande) zu erleichtern, sind hier und da Städte an den Steppenflüssen erbaut. Überall hat Viehzucht in dem unermesslichen Raume begonnen. (2004, p. 29)

[i]n order to ease the traffic between the coast and Guyana (the Orinoco country), cities have been built here and there on the rivers of the steppes. All across the immeasurable space, animal husbandry has begun. (2014, p. 37)

At several points throughout the volume a similar tension is at play, when the gaze of the enlightened Prussian mining officer who, willingly or not, represents the European colonial power clashes with a more egalitarian poetic point of view. In the passage that follows this description of husbandry in the Llanos, the essay returns to the romantic wanderer again. This brings about another drastic change in discourse and level. As opposed to the use of measurements and geographical descriptions that suggest a power to control landscape and capture its essence in words and numbers, an aesthetics of splendour raises doubts about the possibility of controlling space. Humboldt's essayistic subject speaker refers to the landscape's visual power when he describes small thunderstorms on the plains:

Als trichterförmige Wolken, die mit ihren Spitzen an der Erde hingeleiten, steigt der Sand dampfartig durch die luftdünne, electrisch geladene Mitte des Wirbels empor: gleich den rauschenden Wasserhosen, die der erfahrene Schiffer fürchtet. Ein trübes, fast strohfarbiges Halblight wirft die nun scheinbar niedrigere Himmelsdecke auf die verödete Flur. Der Horizont tritt plötzlich näher. Er verengt die Steppe, wie das Gemüth des Wanderers. (2004, pp. 29-30)

In the form of funnel clouds with their tips gliding across the earth, the sand rises like steam through the airless, electrically charged center of the vortex, like the hissing waterspouts feared by experienced boatmen. A hazy, almost straw-colored half-light is thrown by the seemingly low-hanging heavens upon the desolate plain. The horizon draws suddenly nearer. It constricts the steppe and the mood of the wanderer as well. (2014, p. 37)

¹³ In his *Essai politique sur l'île de Cuba* (1826), especially in Chapter Seven, Humboldt condemns the brutality of slavery. This chapter – to Humboldt's anger – was at first omitted in the English translation. The French and Spanish version do, however, contain the famous statement: "La esclavitud es, sin duda, el mayor de todos los males que han afligido a la humanidad" (Humboldt, 1998, p. 301) which puts it bluntly that slavery is, without doubt, the worst evil.

It is, once again, the combination of images of light, sea and vastness that creates a setting of overpowering visuality which the figure of the almost mystical wanderer, who has reappeared out of nowhere, experiences. The natural environment is staged as an independent agency with the power to humble the human watcher. In addition to thunderstorms, vast numbers of savage horses and wild cattle roam through the landscape by day. At night they are attacked by vampire bats which suck their blood. It is no coincidence that those species, horses and cattle, were originally, introduced into South America by European settlers and agents of colonialism. Symbolising the unrest brought about by the colonial governments, they add to the slightly uncanny imagery of a tamed landscape which can suddenly turn overwhelmingly wild again. The landscape vision of the wanderer captures the metaphysical surplus which rational discourse cannot capture. It is a landscape that is permanently shifting, yet one that can be returned to thanks to measurements.

Domingo Faustino Sarmiento, *Facundo. Civilización y barbarie*

In *Facundo. Civilización y barbarie* Domingo Faustino Sarmiento takes Humboldt's thoughts on cultivating wild landscapes a step further. He identifies the domestication of space as *the* crucial challenge the independent yet highly disorganised young Argentinian nation has to face on its way towards modernity.¹⁴ Written at a time when a group of caudillos, powerful and often brutal gaucho warlords, ruled over Argentina's provinces, the fifteen chapters of *Facundo* have since become a milestone of South American literature.¹⁵ The book was first serialized in 1845 by the Chilean newspaper *El Progreso* and it was later that year published in book form (see Yahni, 2008, pp. 18-21). During this time, Sarmiento lived in exile in Chile, fearing execution by the troops of Argentinian dictator Juan Manuel de Rosas. Whereas urban life in Buenos Aires was characterised by European civilized culture, barbarism ruled in the provinces and most of all in the uncultivated sphere of the Pampas. The nature-culture dichotomy that features prominently in the book's title is also its central theme. Sarmiento's image of Argentina is structured around a series of oppositions: city versus country; cultivated Europeans versus raw gauchos or caudillos; the elemental

¹⁴ The Republic of Argentina was already founded in 1810 in Buenos Aires, but only in 1816 was independence from Spain officially declared at the Congress of Tucumán.

¹⁵ Apart from Andrés Bello, José Martí and Eugenio María de Hostos, Sarmiento is one of the most influential Latin-American essayists. Especially his treatment of nature resonated with many writers (see Oviedo, 2001, p. 366).

force of the earth versus the intellectual power of the human mind. Nature, in these dichotomies is construed both as a menacingly wild sphere and as an aesthetically splendid counter-force on which a national identity can be grounded because it distinguishes Argentina from Europe. But these oppositions also compose a black-and-white world-view that lacks a more moderate middle-ground. It is the aesthetics of the sublime, in particular, that runs contrary to the binaries. By staging the agency of matter, the text undoes to a degree the oppositions it constantly constructs. The genre-bending interdiscursiveness of the nature essay allows for these dialectic dynamics, beginning with what is perhaps one of the most famous sentences of South American literature:

¡Sombra terrible de Facundo voy a evocarte, para que sacudiendo el ensangrentado polvo que cubre tus cenizas, te levantes a explicarnos la vida secreta y las convulsions internas que desgarran las entrañas de un noble pueblo! (Sarmiento, 2008, pp. 37-38)

Terrible specter of Facundo, I will evoke you, so that you may rise, shaking off the bloody dust covering your ashes, and explain the hidden life and the inner convulsions that tear at the bowels of a noble people! (Sarmiento, 2003, p. 31)

Sarmiento composed *Facundo* as a literary attack against the two caudillo leaders, Juan Facundo Quiroga and Rosas, yet without the intended results. Instead of destroying their reputation, he immortalized them, and initiated the genres of the gaucho novel and the dictator novel. Whereas the beginning – on which I will focus here – evokes and discusses the influence of Argentina's wide landscapes on the nation's culture and population, as it locates the roots of Argentinian identity in the very soil of this country, Chapters 5-13 recount the biography of Facundo Quiroga; and the two last chapters criticise Rosas' federalist despotism.

Although the book as a whole is not a nature essay but rather a hybrid that is famous for transgressing genre boundaries between novel, biography, essay, anthropological, sociological, and geographical study (cf. Piglia, 1993, p. 72), it bears the key features of the nature essay. *Facundo* is told from the subjective perspective of an essayistic first-person narrator who turns to Argentina's history, its geography, and to qualities of gaucho life in general. The text is further characterised by its engagement with empirical places, and a penchant for contemplation together with sudden changes in discourse and style that prompted Sarmiento to call *Facundo* "[e]nsayo y revelación" (2008, p. 51) / "[a]n essay and a revelation" (2003, p. 40). The fact that it constantly links the question of Argentina's political future to the development of a national public infrastructure running through the plains of the Pam-

pas has led to *Facundo*'s reputation as the "first work of Latin American geography" (Madan, 2011, p. 262). Including *Facundo* in a survey on measuring and mapping in the nature essay thus promises important insights into the genre's discursive formation and range.

The first chapter is entitled *Physical Aspect of the Argentine Republic, and the Ideas, Customs, and Characters It Engenders*. It opens with an outline of Argentina's location within South America:

El Continente Americano termina al Sud en una punta en cuya extremidad se forma el Estrecho de Magellanes. Al Oeste, y a cierta distancia del Pacífico, se extienden paralelos a la costa los Andes chilenos. La tierra que queda al Oriente de aquella cadena de montañas, y al Occidente del Atlántico, siguiendo el Río de la Plata hacia el interior por el Uruguay arriba, es el territorio que se llamó Provincias Unidas del Río de la Plata, y en el que aún se derrama sangre por denominarlo República Argentina o Confederación Argentina. (2008, p. 55)

The American continent ends to the south in a point, at whose extreme end the Strait of Magellan is formed. To the west, and at a short distance from the Pacific, the Chilean Andes run parallel to the coast. The land that lies to the east of that chain of mountains and to the west of the Atlantic, following the Río de la Plata toward the interior upstream along the Uruguay, is the territory formerly called the United Provinces of the Río de la Plata, and there, blood is still being shed in order to name it either the Argentine Republic or the Argentine Confederation. (2003, p. 45)

Sarmiento's narrator describes Argentina as if he were looking at it on a map, following its margins with his index finger. Like Humboldt, he describes it without actually being present. Instead of describing place-experience he rather focusses on larger geographical matrices. The map he seems to have in mind while writing is, however, imagined. At the time when *Facundo* was published no such map existed. By the mid-nineteenth century, official frontiers between the individual South American nations were not yet properly established, as the process of nation building was still in motion. The focus on natural barriers and margins, notably mountains, rivers and coastlines derives from the text's geopolitical impetus, culminating in a remark on the process of nation building in the last sentence quoted above. The use of geographical nouns that point to locations, cardinal directions, and natural borders with other nations becomes a means for constituting national space through writing. Sarmiento thereby evokes and anticipates the missing national map of Argentina more than forty years before the *Atlas de la República Argentina* (1885-1892) and the *Mapa de la República Argentina* (1896) were published (cf. Sorensen Goodrich, 1996, p. 105).

After outlining Argentina's position within the continent, Sarmiento's narrator turns towards the nation's characteristic landscapes:

El mal que aqueja a la República Argentina es la extensión: el desierto la rodea por todas partes y se le insinúa en las entrañas: la soledad, el despoblado sin una habitación humana [...] (2008, p. 56).

[t]he disease from which the Argentine Republic suffers is its own expanse: the desert wilderness surrounds it on all sides and insinuates into its bowels; solitude, a barren land with no human habitation [...] (2003, p. 45).

Ignoring the presence of indigenous settlers, the text emphasises the absence of human culture when focussing on desert landscapes.¹⁶ It is interesting that Sarmiento's narrator derives Argentina's main landscape feature – vastness – from Humboldt's *Über die Steppen und Wüsten*. Not only do Humboldt quotations serve as epigraphs for the first and second chapter,¹⁷ he also describes the Pampas as "la imagen del mar en la tierra; la tierra como el mapa" (Sarmiento, 2008, p. 57) / "an image of the sea on land, the land as it looks on the map" (Sarmiento, 2003, p. 46) at one point in the first chapter, quoting Humboldt's landscape vision of the dried-out sea. Further inter-textual allusions to the German explorer follow.

According to Mary Louise Pratt's study of postcolonial travel literature *Imperial Eyes*, "[t]hree images in particular, all canonized by Humboldt's *Views*, combined to form the standard metonymic representation of the 'new continent'" (2008, p. 123). Humboldt's paradigmatic South American landscape imageries were: tropical forests, snow-covered mountains, and wide plains. The fact that Sarmiento draws on central motifs of European nature writing in order to depict his native country – he frequently refers to European travel documents, science, and culture – might seem strange at first sight. But then again he could not refer to a broad South American literary tradition as it did not yet exist, while the influence of Humboldt's landscape imagery loomed large over South America. Although Humboldt never actually travelled to Argentina, he has shaped the way people think about its landscapes. Particularly for the Argentinian writers of the 'Generación del 37' who were born shortly after the 'Revolución de Mayo' in 1810 and to which Sarmiento belonged, it was quite common to see their native landscapes through the eyes of European

¹⁶ It should also be pointed out that, as a politician, Sarmiento pursued an immigration policy one would call racist today. On the one hand he sought to eliminate the caudillos, on the other he argued against the black South American population in favour of white northern European settlers. This goes to show that strong nature-culture dualisms often translate into similar divisions when it comes to human life (see Jones, 1993).

¹⁷ Sarmiento misleadingly attributed the first epigraph to the British writer and colonial administrator Sir Francis Bond Head, but the translator has identified in this passage an extract from Humboldt's 1808 *Tableaux de la nature* (Cf. Ross, 2003, p. 264). The second chapter begins with a quotation from the French translation of *Views of Nature*: "Ainsi que l'océan, les steppes remplissent du sentiment de l'infini." (Sarmiento, 2003, p. 59 / Humboldt, 2004, p. 17). Both evoke the extension of space.

Romanticism's travel writing and paintings, as Noël Salomon points out (cf. 1984, p. 77). Such references to documents of European writers fulfil two functions. They make postcolonial discursive power relations visible, in the sense that intertextual links demonstrate who says what about South America, and they serve as authorities that witness to Sarmiento's geographical writing from outside (see Sorensen Goodrich, 1996, p. 90).

Where Humboldt ponders on the benefits of a scarce human population for the diversity of flora and fauna, Sarmiento rather argues from a socio-political perspective when he points out that the huge size of the plains makes it hard to establish a smoothly running infrastructure necessary for commerce and likewise for education. Making use of the reflection level's modes of reasoning and explaining, he argues that, lacking a proper transport network, Argentina's landscapes isolate settlers from one another. The interaction between humans and the natural world is, thus, clearly portrayed in terms of its social impact. In isolation Argentines acquire "el hábito de vivir lejos de la sociedad y a luchar individualmente con la naturaleza" (Sarmiento, 2008, p. 63) / "the habit of living far from society and of struggling alone with nature" (Sarmiento, 2003, p. 50). This situation leads to barbarism because violence and physical strength are the only virtues which enable people to survive in wild territories. The result is: "el predominio de la fuerza brutal" (2008, p. 62) / "the predominance of brute force" (2003, p. 50). The inhabitants of the Pampas, as Sarmiento sees them, perceive their natural surroundings as a constant threat. Instead of dwelling in peace with their environment, they struggle with it. Sarmiento frames their relation to nature in a manner that brings to mind the tragic mode, described by Northrop Frye as one in which "the human world is a tyranny or anarchy" (1963, p. 19). Animals are dangerous predators, and the plains are bleak and full of criminal outlaws. The environment is, in other words, a dangerous *locus horribilis*. Sarmiento, however, goes beyond the point of lamenting separation. He uses the nature-culture divide to reinforce his political reasoning as he emphasizes the negative impact of wildness. Hinting at the technical possibilities of landscaping, he considers ways and means of turning wild nature into a less hostile sphere that can be further developed and used. According to Sarmiento's narrator, the absence of natural obstacles makes Argentina's plains vast, but it also makes them perfectly fit for fast direct transport routes:

Esta llanura sin límites que, desde Salta a Buenos Aires y de allí a Mendoza por una distancia de más de setecientas leguas, permite rodar enormes y pesadas carretas sin encontrar obstáculo alguno, por caminos en que la mano del hombre

apenas ha necesitado cortar algunos árboles y matorrales, esta llanura constituye uno de los rasgos más notables de la fisonomía interior de la República. Para preparar vías de comunicación, basta solo el esfuerzo del individuo y los resultados de la naturaleza bruta [...] (2008, p. 61).

This limitless plain, which from Salta to Buenos Aires and from there to Mendoza, for a distance of more than seven hundred leagues, allows enormous, heavy wagons to roll without meeting a single obstacle on roads where human hands have scarcely needed to cut down more than a few trees and shrubs, this plain constitutes one of the most notable features of the Republic's interior physiognomy. To prepare routes of communication, all that is needed are individual effort and the results of raw nature [...] (2003, p. 49).

To domesticate the Pampas by measuring, mapping, and cultivating them is just a matter of time it seems. Vastness is not an aesthetic category in this passage but a determining factor for the purpose-based reasoning of a landscape developer. Taking into account its peculiar landscape formation, Sarmiento's narrator lists all geographical preconditions in order to explain how Argentina could achieve modernization. However, this rationalist take on nature makes up only one of the entangled strands of Sarmiento's writing. Despite the title's clear binary, nature depictions oscillate between Romantic love of infinity and the urge to pursue the enlightenment project of modernisation that was first initiated by colonial powers. The visual depictions of landscapes are informed by the sudden changes in level we find so often in nature essay writing. Thoughts on the need to re-landscape Argentina's plains morph into a celebration of the nature experience, turning the mode of reflection into introspection:

Allí la inmensidad por todas partes: inmensa la llanura, inmenso los bosques, inmensos los ríos, el horizonte siempre incierto, siempre confundiéndose con la tierra, entre celajes y vapores ténues, que no dejan, en la lejana perspectiva, señalar el punto en que el mundo acaba y principia el cielo. (2008, p. 56)

There, immensity is everywhere: immense plains, immense forests, immense rivers, the horizon always unclear, always confused with the earth amid swift-moving clouds and tenuous mists, which do not allow the point where the world ends and the sky begins to be marked in a far-off perspective. (2003, pp. 45-46)

Sarmiento's use of language in this long sentence, particularly, the repetition of the attribute 'inmenso', sheds light on his fascination with the landscape. This style seeks to transmit a sense of the actual thought processes while experiencing the landscape. Moving away from the mode of explaining and reasoning, Sarmiento's narrator adopts a style that corresponds to the level of introspection. One could even argue that this passage shows certain characteristics of an interior monologue. Words are not so much used to indicate geographical places and dimensions: they acquire a poetic meaning.

This subjective, emotional response to landscape is even more prevalent in the second chapter, *Argentine Originality and Characters*, in which Sarmiento's narrator immerses himself in romantic evocations of nature's aesthetic power. On the level of reflection, he links the concept of a natural spectacle to poetry, reasoning that literature needs "el espectáculo de lo bello, del poder terrible, de la inmensidad" (2008, p. 78) / "the spectacle of beauty, of terrible power of immensity" (2003, p. 61). The vast landscapes are more than an obstacle; they also provide a source for experiences of the sublime in which the essayistic subject speaker finds poetry's origins. He therefore goes on to ask his readers how Argentines could not be poets,

cuando en medio de una tarde serena y apacible, una nube torva y negra se levanta sin saber de dónde, se extiende sobre el cielo mientras se cruzan dos palabras, y de repente el estampido del trueno anuncia la tormenta que deja frío al viajero, y reteniendo el aliento por temor de atraerse un rayo de dos mil que caen en torno suyo? [...] Masas de tinieblas que anublan el día, masas de luz lívida, temblorosa, que ilumina un instante las tinieblas, y muestra la pampa a distancias infinitas, cruzándola vivamente el rayo, en fin, símbolo del poder. (2008, pp. 78-79)

when, in the middle of a serene, pleasant afternoon, a grim, black cloud appears from who knows where, stretches itself across the sky before two words can be said, and suddenly a stampede of thunder announces a storm that leaves the traveler cold and holding his breath, for fear of attracting one of the thousands of lightning bolts coming down around him? [...] Masses of darkness that cloud the day, masses of trembling, livid light that illuminate the darkness for an instant and show the infinite distance of the Pampas, lightning flashing across them, the final symbol of power. (2003, p. 61)

The thunderstorm is depicted as a poetic spectacle that overwhelms all rationalist attempts to capture space. In its focus on a sublime landscape experience that emerges out of the interplay between light, vastness, and the perception of a romantic wanderer, this passage is highly reminiscent of Humboldt's *Ansichten*. Once again, the attention paid to the dynamics of optical phenomena allows the essayist to counter the notion of spatial control implied in the aesthetics of measuring and mapping. Unlike the non-place-based cartographic perspective that opens *Facundo*, the essayistic subject speaker is much closer to the landscape now. He cannot refrain from experiencing it.

Facundo provides at least two models of geographical knowledge: modern scientific geography and a more instinctive sense of place. The second chapter, in particular, presents us with an alternative to the modernizing European way of dealing with space. In the tradition of 'Costumbrismo', a Hispanic literary tradition that depicts customs and everyday life, Sarmiento's narrator draws up an inventory of generic gaucho types. Short micro-narratives zoom into a given setting where we learn about

the deep instinct-driven knowledge of gauchos like the *rastreador* (the track finder) or the *baqueano* (the scout), who "conoce a palmos veinte mil leguas cuadradas de llanuras, bosques y montañas" (2008, p. 85) / "knows twenty thousand square leagues of plains, forests and mountains like the palm of his hand" (2003, p. 66). As liminal characters the gauchos constantly cross the boundaries between city and country. They live outside of the cities but work as guides, even for military troops. General Rosas, for instance, is a *baqueano*, who, according to the narrator, "conoce por el gusto el pasto de cada estancia del sur de Buenos Aires" (2008, p. 86) / "knows by its taste the grass of every estancia in southern Buenos Aires province." (2003, p. 67) The narrator depicts the gauchos' ability to be truly at home in their natural environment – an ability that has been lost for most other people. The *baqueano*'s innate knowledge of space represents an alternative way of dealing with nature which remains in contrast to the distanced geographical perspective of measuring and mapping space (see Madan, 2011, p. 260). The gaucho comes so close to his natural environment that he even incorporates it by taking bits and pieces of it into his mouth, as Sarmiento's narrator observes when he depicts the *baqueano*'s sense of place:

Si se encuentra en la pampa y la oscuridad es impenetrable, entonces arranca pastos de varios puntos, huele la raíz y la tierra, los masca, y después de repetir este procedimiento varias veces, se cerciora de la proximidad de algún lago o arroyo salado o de agua dulce [...] (2008, p. 86).

if he finds himself in the Pampas and the darkness is impenetrable, then he pulls up grass from different spots, smells the roots and the soil, chews them, and after repeating this procedure various times confirms the proximity of some lake, or fresh or saltwater stream [...] (2003, p. 67).

On an emotional level the essayistic speaker marvels at the *baqueano*'s olfactory sensitivity and at the *rastreador*'s ability to follow the traces of animals over miles and miles, but on a rationalist level he argues against the gaucho's existence because it runs contrary to the ideals of industrialised capitalism. Reading Sarmiento today means facing this ambiguity between the habit of romanticising a deep connection with our environment and the need to overcome it in order to domesticate wild nature. This dynamic is, in fact, typical of European perspectives in a postcolonial context. The American cultural anthropologist Renato Rosaldo coined the term 'imperialist nostalgia' to describe the sentimental discourse that arises from the paradox that agents of imperial European powers (e.g. scientists, soldiers, merchants) "long for the very forms of life they intentionally altered or destroyed." (1989, pp. 107-108) According to Rosaldo, those imperialist agents tend to mourn the innocence and natural splendour of the original cultures and landscapes that without their

interaction might not have been in danger of vanishing. They only begin to worship the environment after destroying or modernising it. This does not even have to happen as a violent process, transformation might just as well result from contact with enlightened culture, as in Humboldt's case. Although Sarmiento's speaking subject is not a typical colonial agent, he adopts this attitude of imperialist nostalgia in dealing with the gauchos. On the one hand, he yearns for the depth of their sense of place, while, on the other, he promotes a radical departure from pre-modern cultures and landscapes. The breaks and digressions of the essay genre enable him to shift focus according to the discourse in which he argues, be it enlightened or romantic.

Whereas the first and second chapter of *Facundo* provide examples of place and non-place based writing, the twelfth chapter, *Society at War*, brings the two perspectives together in a vision of a utopian place. Sarmiento describes an episode in the life of Facundo Quiroga. The caudillo visits the province Tucumán in northern Argentina near the border to Bolivia. Although the geographical name 'Tucumán' refers to a physical location that actually exists, the text alerts us to the fact that the place is also a literary construction. The benign local environment, in which humans, animals, and plants coexist peacefully, is staged as "el edén de América" (2008, p. 266) / "America's Eden" (2003, p. 179), contrasting strongly with the wild landscapes of the Pampas. Drawing on the aesthetics of collecting, the essayistic subject speaker inventories Tucumán's ecosystem by hinting at its great variety of beautiful animals: he lists "enjambres de mariposas doradas, de esmaltados picaflares, millones de loros color de esmeralda, urracas azules, y tucanes naranjados" (2008, p. 267) / "swarms of golden butterflies, enamelled hummingbirds, millions of parrots the color of emeralds, blue magpies and orange toucans" (2003, pp. 179-180). By inventorying sub-tropical nature, Sarmiento's narrator blends romantic nostalgia and neoclassical pastoral into this vision of a splendid *locus amoenus* (cf. Salomon, 1984, p. 75). When he describes how the population of Tucumán meets every weekend in the forests where they sit on orange blossoms, dance and make music, he asks his readers rather ironically: "¿Creéis por ventura, que esta descripción es plagiada de *Las Mil y una Noches*, u otros cuentos de hadas a la oriental?" (2008, p. 268) / "Do you by chance think this description is copied from *A Thousand and One Nights* or other Oriental fairy tales?" (2003, p. 180) The narrator is accordingly conscious of having taken the Edenic imagery too far. In an autorepresentational gesture, the text points to its own fabrication, revealing the artificiality of this particular nature image. Tucumán's para-

disse garden is created in language, consisting of multiple intertextual and intercultural layers, and it is highly ideologically charged.

Having properly established his setting, Sarmiento’s narrator expands his depiction into a short narrative sequence. Facundo has arrived in Tucumán with his army. After looting the city he retreats to the forest to relax, where he is approached by a group of the most beautiful women of Tucumán. They plead with him to rescue their husbands, who are to be executed by Facundo’s army while standing naked on the town’s plaza central. Facundo chats with them in a friendly manner, but he suddenly alludes to the sound of gunfire, declaring that it is too late for him to interfere, as their husbands have already been shot. The idyllic landscape of Tucumán, on the one hand, provides a strong contrast to Facundo Quiroga’s cruelty. On the other, its beauty evokes the possibility of a utopian, different South America in which the splendour of the forests of Tucumán comes to symbolise the rising power and virtue of the young nation. Tucumán is a utopian place like Paradise itself. It is geographically located within the nation’s borders, but remains unreal nevertheless. It cannot exist – yet. Although Sarmiento argues in favour of cultivation, he repeatedly draws our attention to Argentina’s unique nature: its vastness and beauty. By “expressing the grandeur of its landscape and the struggle to represent it, Sarmiento created the voice of the modern Latin American author as a response to an exceptional American reality” (2003, p. 2), Roberto González Echevarría claims. Despite their infinity the Pampas possess the power to act as a powerful trope and resource on which national identity can be grounded. In using an aesthetics of measuring and mapping, Sarmiento underscores the reality of their size, demonstrating that Argentina exists in its vast physicality both on the map and as a young independent nation.

Henry David Thoreau’s Survey of Walden Pond

When *Walden* was published as book in 1854,¹⁸ the American transcendentalist Henry David Thoreau had already left behind his life in a wood cabin on the shores of Walden Pond in Massachusetts. Starting in spring 1845, he had spent two years and two months at Walden Pond, on a plot of woodlands recently bought by his friend Ralph Waldo Emerson. Distinguishing himself from the retreat of many other dropouts,

¹⁸ A partial imprint had already been published in 1852 in *Sartain’s Union Magazine*, (cf. Thoreau, 2008, p. lv).

Thoreau makes it quite clear that he sought loneliness for the sake of a better point of view on society, in order to figure out the "essential facts of life" (2008, p. 83), not in a gesture of escapism. Designed as an experiment in living, the project features some typical elements of a scientific test assembly. In the first chapter, *Economy*, Thoreau thoroughly outlines the materials he used to build his cabin and the cost of food and clothes. This chapter abounds in numbers and features manual-style accuracy. While depicting his stay in the cabin, Thoreau's first person narrator reflects on greedy peasants, the time-consuming need to work in order to make money, and the ideal of simplifying in order to gain more freedom, to which I will return in Chapter 3.3 on tales of transformation and experience.

Due to its close attention to nature's processes and due to Thoreau's commitment to tackling attitudes towards nature which are merely purpose-based and exploitative, the text has gained a reputation as "ur-text, the foundational document, of American nature writing" (Nichols, 2009, p. 348). So far, ecocritics have described *Walden* mostly as a key text of nature writing without paying much attention to its genre outline. I am therefore offering a rereading of the text that is concerned with its genre-specifics and viewing *Walden* as a cycle of tightly interconnected essays. While *Walden* itself offers no paratextual indication of a genre context, I argue that features of the essay, in particular its penchant for subject-based thought processes, theme-based chapters, and stylistic and formal openness, necessitate a characterisation of the text as essay cycle.¹⁹ Montaigne's shadow looms large over Walden Pond, not only in the structure of thought, as Frederick W. Braun (1986) argues, but also in the way Thoreau's narrator frames the narrative point of view as a peculiar epistemological mode. Right in the beginning, he argues in favour of a subjective first-person perspective:

In most books, the *I*, or first person, is omitted; in this it will be retained; that, in respect to egotism, is the main difference. We commonly do not remember that it is, after all, always the first person that is speaking. I should not talk so much about myself if there were any body [sic] else whom I knew as well. Unfortunately, I am confined to this theme by the narrowness of my experience. (2008, p. 5)

Not only does Thoreau's narrator depict his retreat much in the manner of Michel de Montaigne's migration into a library tower on his estate in the Périgord as a conscious and necessary detachment from society, a declaration of independence of his own, he also refers to Montaigne intertextually. The second paragraph of *Walden*,

¹⁹ Interestingly, *Walden* has been described as essay cycle by other German scholars (see, for instance, Pfister, 1991, p. 549; Braun/Schulz, 2010, p. 76).

from which I have just quoted, echoes the preface of Montaigne's *Essais*. In response to religious modes of knowing, both Montaigne and Bacon had turned against dogmatic truth and sought knowledge beyond the "authority of theological works" (Faulkner, 1997, p. 50). For Montaigne this meant that he radically turned his attention towards himself. In his foreword *Au lecteur* he explains this approach as follows:

Je veus qu'on m'y voie en ma façon simple, naturelle et ordinaire, sans contantion et artifice: car c'est moy que je peins. Mes défauts s'y liront au vif, et ma forme naïfve, autant que la reverence publique me l'a permis. Que si j'eusse esté entre ces nations qu'on dict vivre encore sous la douce liberté des premieres loix de nature, je t'asseure que je m'y fusse très-volontiers peint tout entier, et tout nud. (1962, p. 2)

Here I want to be seen in my simple, natural, everyday fashion, without striving or artifice: for it is my own self that I am painting. Here, drawn from my life, you will read of my defects and my native form so far as respect for social convention allows: for had I found myself among those peoples who are said still to live under the sweet liberty of Nature's primal laws, I can assure you that I would most willingly have portrayed myself whole, and wholly naked. (1991, p. lix)

It is the focus on the patterns of perception of the human self in its various guises and many different moods that links Thoreau to Montaigne, and to nature essayists like Emerson, Humboldt and Goethe that precede him. But, like the writing of these predecessors, *Walden* is not merely personal-ephemeral, it also draws on and adds to scientific data, including geographical measurements and mappings. In comparison with Humboldt's and Sarmiento's writing, it is striking that *Walden* lacks both broad landscape panoramas and aerial perspectives. Its focus is rather on the place itself, a kind of microcosm that Thoreau seems to know almost as well as Sarmiento's gaucho scouts know their Pampas. Adopting geographical discourse, he describes the physical location in empirical terms: "I was seated by the shore of a small pond, about a mile and a half south of the village of Concord and somewhat higher than it, in the midst of an extensive wood between that town and Lincoln" (Thoreau, 2008, p. 79). As distinguished from Humboldt's and Sarmiento's outbound narrators who roam in impenetrably vast territories which sometimes appear threateningly unfamiliar to them, Thoreau's narrator limits his explorations to a confined local sphere. Still, he often experiences awe and wonder in the presence of this allegedly familiar nature. Although he sometimes makes it seem as if he had retreated into the middle of nowhere, claiming immediately in *Walden*'s first paragraph, for example, "I lived alone, in the woods [...]" (ibid., p. 5), Kent Curtis points out that the land surrounding the pond was in fact "a working forest" (2010, p. 42) that provided wood for the railway line that led past it and for the population of Concord, the town where Thoreau grew

up and that was in walking distance. But this did not keep Thoreau from staging his retreat as a gesture of turning away from city life and towards nature. Following the four seasons from summer to spring, the essay cycle condenses Thoreau's actual twenty-six month experience into one year. His ritual of dipping into the pond each morning illustrates a powerful yearning to immerse himself into nature's cycles. However, although *Walden's* metaphysical dimension, its "idiosyncratic, 'poetic' interrogation of nature" (2001, p. 534), to use John Pipkin's words, is very strong, its scientific streak should not be overlooked.

Of the three texts discussed in this chapter, Thoreau's is the only one that includes the illustration of an actual map. At the time when he was writing up *Walden* in the early 1850s, Thoreau worked as land surveyor.²⁰ His interest in space and map making features most prominently in the chapter *The Pond in Winter*, on which I will focus here, because this is where he describes the mapping of Walden Pond. The survey takes place in winter when "the liquid and trembling surface of the pond [...]" becomes solid to the depth of a foot or a foot and a half" (2008, p. 252). It is so thick that it can bear humans and carriages alike. Thoreau's narrator, who is standing on the frozen, snow-covered pond, mentions the dynamics of liquidity and firmness that have proven to be so important for the interplay between an aesthetics of measuring and the essay's poetic dimension before it even comes to measuring itself. The observation of changing aggregate states makes him think of hibernating marmots in the surrounding hills. Continuing this thought, he uses personification as a rhetorical device to state that the pond "closes its eye-lids and becomes dormant for three months or more." (Ibid.) Looking down into the water he encounters a parallel world:

kneeling to drink, I look down into the quiet parlor of the fishes, pervaded by a softened light as through a window of ground glass, with its bright sanded floor the same as in summer; there a perennial waveless serenity reigns as in the amber twilight sky [...] (ibid., pp. 252-253).

Although it is by no means summer, the underwater world seems to lie outside of nature's seasonal cycles. Poetic discourse is clearly prevalent in this passage that evokes a slightly surreal parallel cosmos hidden underneath the ice. By calling the hole in the ice a "window" and speaking of the fishes' "parlor" Thoreau's narrator frames the pond as a place of dwelling not different from his own cabin that features windows too. Anthropomorphising depiction techniques allow him to destabilise the

²⁰ Between 1849 and 1861 Thoreau worked as a part-time land surveyor. Patrick Chura points out that his "surveying career began at Walden" (2010, p. ix; see also Curtis, 2010, p. 40).

nature culture binary. He challenges the assumption that a pond forms part of 'nature' and is therefore a place that lies outside what is commonly considered to be a sphere of dwelling and therefore 'culture', by acknowledging that other species inhabit it. To them, water is, in fact, what a house is to humans: a home. From the start Thoreau plays with such uncommon perspectives. Instead of relying on elevated omniscient points of view he rather claims that the underwater world is like heaven "under our feet" (ibid., p. 253), deliberately recasting traditional patterns of perception shaped by geographical knowledge that gives a clear indication of directions.

In line with the aesthetics of measuring, Thoreau's subject speaker plays with his changing perception when he later modifies his distance from the ice, noting that "seen near at hand, [it] has a green tint, but at a distance [it] is beautifully blue" (ibid., pp. 264-265). And, at another point, the incidence of light confuses his senses to a degree that his self-perception is troubled when he sees "a double shadow of myself, one standing on the head of the other, one on the ice, the other on the trees or hill-side." (Ibid., p. 262) In a similar manner as in the previously discussed texts, light plays a crucial role in this passage. It is mentioned in its ability to confuse perceptions and trouble our senses. By emphasising his changing perspective, Thoreau's narrator underlines his subjective point of view. This focus on visual phenomena, as is typical of the mode of description, leads to results similar to those in Humboldt's and Sarmiento's writing: it counterbalances the notion that control over space is possible.

According to John Pipkin this is a typical feature of Thoreau's writing in general. Pipkin lists important aesthetic principles that Thoreau frequently uses. Although his model is not limited to *Walden*, Pipkin's (2001) so-called 'place-mapping tropes' provide useful categories. In addition to taking uncommon angles – a trope that Pipkin calls 'reorientation' – he points out that universalizing processes determine Thoreau's writing. They are, for instance, at play at the end of *The Pond in Winter*. In the last paragraph Thoreau claims, inspired by reading the Hindu scripture *Bhagvat Geeta*, that the "pure Walden water is mingled with the sacred water of the Ganges." (2008, p. 266) Geographical distance does not seem to matter as he relates locations to each other that are actually very far apart. But, unlike Humboldt's use of global correspondences, Thoreau's way of linking different locations to each other is brought about by his own private reasoning rather than by any elaborated scientific theory. Besides, it always remains clear that he is still sitting on the shores of Walden Pond and not gliding above the Ganges. The outbound mode of travelling that is so

important for other texts that feature an aesthetics of measuring does not matter much for Thoreau. The key to his indifference towards international explorations of his own might lie in a third trope Pipkin mentions: Thoreau's tendency to "externalize", by which he means that "no matter how a place is defined, what we seek is always beyond it." (2001, p. 537) This trope determines most switches from scientific to metaphysical point of view, for instance when Thoreau's narrator asks his readers in the last chapter, *Conclusion*, to "be a Columbus to whole new continents and worlds within you, opening new channels, not of trade, but of thought" (2008, p. 286), turning space into a category of the mind.

But let us return to the surveying episode: Thoreau decides to measure and map the pond "with compass and chain and sounding line." (Ibid., p. 254) The geographical tools he mentions provide the first signal of an aesthetics of measuring and mapping that further unfolds in the following passage. The narrator makes the process of acquiring geographical knowledge visible when he describes how easy it was to fathom the pond's depth. Although the procedure of measuring brings Humboldt to mind, Thoreau is less interested in the data his measurements generate than in the aesthetic principles revealed through those numbers:

When I had mapped the pond by the scale of ten rods to an inch, and put down the soundings, more than a hundred in all, I observed this remarkable coincidence. Having noticed that the number indicating the greatest depth was apparently in the centre of the map, I laid a rule on the map lengthwise, and then breadthwise, and found, to my surprise, that the line of greatest length intersected the line of greatest breadth *exactly* at the point of greatest depth [...]. Is not this the rule also for the height of mountains, regarded as the opposite of valleys? (Ibid., p. 258)

In the manner of a natural scientist Thoreau seeks to determine the geographical laws of depth in nature. He maps the pond in order to better understand its essence, its peculiarity within an ecosystem, not in order to re-landscape it. Patrick Chura nonetheless emphasises the fact that the act of mapping itself has a symbolic meaning:

Imposing straight lines and mathematical formulae upon natural irregularities, marking off and subdividing the landscape near Walden Pond, laying out houses, barns and roads in Concord, Thoreau undeniably participated to some degree in civilized encroachment and environmental defacement. (2010, p. 12)

But is this accusation just? Taking into consideration Thoreau's use of analogies with ethics, his real interest seems to be an underlying law of nature rather than defacing his environment. Thoreau himself seems to have anticipated something like this, for he frames the surveying episode in the context of economic discourse, as if to distinguish his project from other types of intervention. The chapter begins with an un-

common social fluctuation around Walden Pond. Thoreau's subject speaker is not the only one who cuts holes into the ice. Early in the morning a group of fishermen has sat down on the shores in search of pickerels. Their innate knowledge of nature is mentioned with respect similar to that which Sarmiento paid to the gauchos. But other workers arrive after the surveying episode. This group of men cuts off the ice and "unroofs the house of fishes, and carts off their very element and air" (Thoreau, 2008, p. 262), the narrator notes, in order to turn it into a commodity and to make a profit. By taking up the lexical field of dwelling/living/clothing again, he contrasts his passive observing attitude with the aggressive intruding habit of the workers. Instead of marvelling at the ice's colour and shape, the "gentleman farmer, who was behind the scenes, wanted to double his money [...]; but in order to cover each one of his dollars with another, he took off the only coat, ay, the skin itself, of Walden Pond in the midst of a hard winter" (ibid., p. 263), Thoreau's narrator rants. Whereas Sarmiento probably would have celebrated the modern entrepreneurship of making the most out of natural resources, Thoreau is visibly repelled by it. Nonetheless, it is he who includes a map of Walden Pond (albeit for non-instrumental reasons) in his book, not Sarmiento.

By providing numbers and angles as well as a surveyor's technical terms, Thoreau hints at the scientific accuracy that underlies his attempt to approach the pond systematically while mapping it. Thoreau appears, in other words, as a modern scientist. A reader who knew no more of *Walden* than this passage, therefore, would have been surprised to learn that Thoreau rejected the American Association for the Advancement of Knowledge's invitation to become a member. In his written reply he referred to the science of White's Selbourne and Humboldt's *Aspects of Nature* (cf. Dassow Walls, 1990, p. 83) in order to explain why he felt estranged from modern American science and closer to the European naturalist tradition.²¹ It was through Emerson's vast library that Thoreau discovered Humboldt, while staying at his friend's house. By 1853, Laura Dassow Walls (ibid.) notes, Thoreau had read all the major works of Humboldt. In addition to a shared set of interests, it is Humboldt's concept of an aesthetic treatment of natural history that seems to matter most for *Walden*, as Thoreau goes beyond the scientific value of geographical data.

Following his survey, he transfers the idea of measuring, in a typical Thoreauvian way, to the human sphere. With the results of his sounding of the pond to hand, Tho-

²¹ For Humboldt's influence on Thoreau see also Dassow Walls, 1995; Pipkin, 2001, p. 534.

reau's narrator claims: "I am thankful that this pond was made deep and pure for a symbol" (2008, p. 256). And he further asks his readers to "draw lines through the length and breadth of the aggregate of a man's particular daily behaviours and waves of life into his coves and inlets, and where they intersect will be the height or depth of his character" (ibid., p. 260). Such changes in discourse are typical of Thoreau's writing and of essayistic changes in level. The idea that the human soul could be mapped introduces an element of irony into the depiction of measuring. It is the reader's task to exclaim that the human soul cannot, of course, be measured (cf. Poetzsch, 2008, p. 388). In shifting measuring discourse from the geographical sphere to the metaphysical, Thoreau challenges unconditional belief in geography's potential. The empirical factuallities of measuring are balanced by hints at the power of the nonvisible world. Rather than suspending *Walden's* poetic dimension in the sounding episode, by changing levels Thoreau translates measuring into a metaphysical practice.

Still, one could ask why Thoreau sticks to the habitus of the meticulous land surveyor in the first place, pointing out that the pond's greatest depth "was exactly one hundred and two feet" (2008, p. 256), and for whom his listing of such precise data matters. What is the function of this insistence on empirical data? One could pick up on Buell's notion of nature writing's dual accountability to fact and poetic imagination. Laura Dassow Walls argues along these lines when she suggests that Thoreau "wished his epiphanies to happen through facts, through sharp and actual experience with real things" (1995, p. 124). But, in addition, the act of mapping is also linked to *Walden's* outline as an experiment in alternative living. Through an aesthetics of measuring and mapping, Thoreau describes Walden Pond as a factually existing place one can return to. The drawing of the map, in particular, hints at the purpose of enhancing its factuality through geographic discourse. Departing from the cartographical conventions of his day, Thoreau includes not only the pond in his map but also his cabin. According to Patrick Chura, who learnt how to practise nineteenth-century surveying from scratch in order to be better capable of understanding what mapping meant for Thoreau, this is highly unusual:

Rather than locate boundaries on his survey, Thoreau locates himself, symbolized by his tiny cabin. Thoreau's inclusion of the ten-by-fifteen-foot man-made object indicated his conviction that his self-created domestic life was substantial enough to locate amid topography. (2010, p. 39)

The map not only presents us Thoreau's location on the pond's shores, it also triggers a reality effect, indicating that Walden Pond actually exists, that one could go and live there like Thoreau used to. One could thus either argue with Buell that Thoreau "re-

fuses to let the pond remain at the subjectified level of an intensely felt green world, a pastoral gem. He must give an exact, proportional account of it (the map)” (1995, pp. 277-278); or one could read mapping as a consciously used strategy that enables Thoreau to demonstrate the reality of his experiment. Unlike the Arcadian landscape of Tucumán which is so beautiful that it seems unreal to us, the map is indeed a powerful tool to prove the existence of this place. “It is obviously no sham, no fable, it is ‘real’ in the sense that it is measurable” (2008, p. 393), writes Poetzsch. In surveying Walden Pond, Thoreau underscores the fact that it is indeed possible to engage in the experiment of an alternative living and cohabiting with nature beyond the exploitative principles of arising industrialised capitalism – a theme to which I will return in Chapter 3.3.

Reading Humboldt, Thoreau and Sarmiento in comparison has revealed significant parallels in the way they use the essay genre to recreate and contemplate human interaction with space, making use of the aesthetics of measuring and mapping. The textual analyses have demonstrated that these aesthetics can be used to very different scientific, personal, and ideological ends that set the three writers apart. But what they have in common is that all of them measured and mapped territories that had never been explored before. Much of the appeal of surveying lies in the idea to be the first to do so. The following chapter turns toward the age of digital maps, virtual encyclopaedias, and mass consumer culture, asking how three contemporary nature essays engage with a world that has already been thoroughly mapped.

2.3 Data Prose – Contemporary Nature Essay Writing: Eliot Weinberger's *Naked Mole-Rats*, David Foster Wallace's *Consider the Lobster*, and Andreas Martin Widmann's *Mind Gardens*

In the lead section of their spring issue 2011 the editors of New York-based literary magazine *n+1* declare the dawn of a new type of literary nonfiction: the information essay. On observing that contemporary essay writing tends to feature disproportionate amounts of data, they note a shift away from argumentation towards the sheer materiality of facts. In this process the essay genre itself is transformed as it takes up ever greater amounts of data. The act of reproducing information in a work of art is not particularly new in itself, though. In *Anatomy of Criticism* Northrop Frye (1957, p. 52) argued that all literary genres can be characterised with regards to their encyclopaedic impulse. Yet, as opposed to canonical examples of the encyclopaedic novel²² like Flaubert's *Bouvard et Pécuchet* (1881), which depicts and mocks its heroes' fact-gathering while still subordinating it to character, discourse, and plot-arches, the information essay relies on "the evolution of a style that resembles 'information for information's sake'" (The editors of *n+1*, 2011).

To support their reasoning *n+1* chose two examples that broadly fit into the nature essay genre. Pointing to John D'Agata's extensive essay on the American nuclear waste disposal site in Yucca mountain near Las Vegas (*About a Mountain*, 2010) and hinting at Donovan Hohn's book-length essay that tracks ten-thousands of rubber bath toys lost in the Pacific Ocean (*Moby-Duck*, 2011 – the title is of course a pun on Melville's encyclopaedic novel), they draw our attention to the extended volume of verifiable data, names, directions, statistics, and other numbers that inform those texts. To give a brief example of what *n+1* refers to, here is an extract from Hohn's book in which he ponders upon the size of one of the largest container ships worldwide:

The carrying capacity of a container ship is measured in TEUs, or twenty-foot-equivalent units, because a standard shipping container is twenty feet long. One twenty-footer equals one TEU, a forty-footer, two. The *China* had a carrying capacity of 4,382 TEUs. [...] Imagine a train pulling 4,382 boxcars: it would stretch for nineteen miles, from the southern tip of Manhattan into Westchester. [...] If Noah had sailed in the *China* instead of his ark, he might not have been able to save every species on earth, but he could have come close. (2012, p. 234)

²² The term 'encyclopaedic novel' is usually attributed to large complex novels that incorporate long passages of expert discourse. In addition, it contains speculations "on its own discursive process of discovery and arrangement, and on the limitations of these processes, given the fact of time and change." (Clark, 1992, p. 105).

The beginning of John D’Agata’s essay, in comparison, reads:

If you take the population of Las Vegas, Nevada, and you divide that by the number of days in the year, there should be 5,000 people in the city and its sub-urbs with a birthday on the same day that Las Vegas began [...] (2010, p. 11).²³

Despite the fact that Hohn and D’Agata are concerned with environmental pollution, the editors of *n+1* argue (perhaps unjustly) that their writing lacks the edge to inspire change. They accuse both authors of excessive encyclopaedic fact-gathering at the price of making sense, as interpretations of the facts are allegedly missing. Much of the data Hohn and D’Agata include in their essays is available online, or otherwise obtainable by research. Implicit in *n+1*’s reasoning is the accusation that both writers had overloaded their essays with information simply because it was there and so easily accessible at that.

Due to its dual commitment to fact and imagination, nature essay writing has always featured verifiable information. Over the course of the preceding chapters we have seen that the urge to explore nature usually remains linked to the impulses to collect data, measure space, and to gather plants and specimens. This chapter asks in which ways nature essays respond to the overabundance of data. In a period where the planet has already been extensively measured and mapped as we have accumulated nature-related data as never before, essayists are challenged by the question of how to respond to the exposure to such great amounts of information which they have not generated. Does this data have to feed into contemporary representations of the natural world? Despite the fact that the Internet has made more information available to more people,²⁴ ways of directing users through this mesh of data are lacking. The *Oxford English Dictionary*, for instance, lists the term ‘information fatigue’, defining it as: “Apathy, indifference, or mental exhaustion arising from exposure to too much information, *esp.* (in later use) stress induced by the attempt to assimilate excessive amounts of information from the media, the Internet, or at work.” (See also Keen, 2012; Baron, 2009, p. 217) The editors of *n+1* find a possible aesthetic response to great amounts of information in what they call ‘the empirical sublime’. Unlike the Kantian sublime, the empirical sublime reminds us “that we’re trapped within an ines-

²³ A twist to D’Agata’s way of dealing with data was later added when it became clear that he changed some vital information in order to render his narrative denser. See D’Agata’s collaboration with proof reader Jim Fingal, *The Lifespan of a Fact* (2012), to get an impression of D’Agata’s rather broad concept of ‘non-fiction’.

²⁴ It must, however, be considered that this applies mostly to the developed countries. According to statistics provided by the International Telecommunications Union in 2014 an estimated 78% of the population in developed countries regularly used the Internet, as opposed to only 32% in the developing world (cf. ITU World Telecommunication, 2014).

capable totality" (The editors of *n+1*, 2011) in which large quantities of information suddenly can seem as deep and impenetrable as a vast landscape panorama. One way of reacting to this is certainly to ignore the abundance of images and facts the Internet provides and to simply go out and seek nature as ever before, as if the so-called 'digital revolution'²⁵ had never happened. This, however, means to risk producing a nostalgia-driven type of literature.

To reflect on animals, landscapes, and plants without taking the existent data into consideration is problematical because it means to ignore the fact that in our days "material objects are interpenetrated by information patterns" (1999, p. 13), as N. Katherine Hayles argues in her study of post-human literature. And many writers are aware of the fact that when they address nature they are not the first ones to do so. Encoded in nature essays of the digital age are, perhaps inevitably, the theories, essays, and images that precede them. Sometimes this exposed self-conscious type of writing can lead away from the actual nature experience. In *The Ecological Thought* (2010), Timothy Morton argues that the new density of interconnectedness that we experience through the current ecological crisis "makes us aware of how interdependent everything is. This has resulted in a creepy sensation that there is literally no world anymore. We have gained Google Earth but lost the world." (2010 p. 30) By representing this new experience of a world that has been thoroughly recorded and translated into information patterns, essayists may obliterate a direct representation of actual experiences of the physical world. In the best case, however, they develop a complex counter-model akin to the genre of the information essay in which information patches are interlaced with accounts of place-based experiences and global visions.

The present subchapter is about nature essays that unfold against the backdrop of the digital revolution and reflect the complexity of contemporary nature experiences not only in their content but also in formal features such as enumerations, intertextuality, heterogeneous settings, and a mode of writing that is conscious of the conditions of textual production. In line with Ursula Heise's demand for "eco-cosmopolitan" (2008, p. 64) aesthetics that combine local and global perspectives, one

²⁵ It is hard to find a universal definition of the term 'digital revolution'. It broadly refers to the drastic social and cultural changes that occurred as a consequence of the introduction of the World Wide Web in 1991, of which everyone seems to have an immediate understanding. A fact often mentioned in this context is that since the global spread of the Internet the doubling of knowledge happens approximately every one or two years as opposed to every couple of hundred years in the early modern times. In this process the way we deal with knowledge has also undergone severe changes. Never before have humans been exposed to such great quantities of data as in the twenty-first century.

could argue that the information essay is particularly capable of underscoring the heterogeneities encompassed in all visions of our environment by incorporating vast amounts of knowledge. It does so mostly in the guise of facts, images, and numeric data, derived from different sources. But, instead of emphasising the ties that hold separate bits and pieces of nature imagery together, aesthetics of the empirical sublime stress struggles with delivering the overall vision that Heise seems to anticipate.

Three contemporary nature essays shall exemplify this: the American writers Eliot Weinberger and David Foster Wallace and the German Andreas Martin Widmann all make use of aesthetic forms that reveal themselves as both a reaction and an outcome of the digital age’s obsession with data. They incorporate encyclopaedic facts and Internet-generated information and transform them into literature. The use of footnotes in Wallace’s essays, enumeration in Weinberger’s piece, and a move towards delocalisation of the narrative perspective in Widmann’s text represent three contemporary strategies to open processes of disorientation and distraction to the reader as their texts negotiate human agency in the anthropogenic mesh of data. I will discuss the essays in the sequence of their publication, starting with Weinberger.

Eliot Weinberger, *Naked Mole-Rats*

Eliot Weinberger was born in New York in 1949 and continues to live there as an essayist, poet and translator. Weinberger’s essays have been published in approximately thirty languages, but in many countries he is still better known for his work as a translator and editor of, among others, Jorge Luis Borges, the Mexican Nobel Prize for literature winner Octavio Paz, and the exiled Chinese poet Bei Dao. Reviewers of his books emphasise the density that characterizes his essay writing by which they mean a tightly knit assemblage of sometimes disparate facts. They point to Weinberger’s affinity for “the catalogue” (Palattella, 2000), his “fondness for lists and taxonomies and odd scraps of learning” (Hutchinson, 2002, p. 8) and describe the experience of reading his essays as being “engulphed in a cataract of fact” that mirrors the “ten thousand things” (Tarn, n. d.) of consumerism. Mark Hutchinson expresses this opinion plainly in his review of *Karmic Traces* (2000) for the *TLS*: “That minds in our time are subjected daily to an unprecedented barrage of information, much of it deeply distressing and over which we have little control, though not novel in itself, is a subject Weinberger has dealt with brilliantly in the past and keeps coming back

to." (2002, p. 8) In foregrounding the act of compiling more than the genuine invention or reflection, Weinberger's essays fit well into the category of the information essay. One of his best known texts, *What I Heard about Iraq* (2005), for instance, is a compilation of hundreds of snippet-like statements made by politicians, soldiers, Iraqi civilians, and others. Hutchinson, therefore, describes the typical Weinberger essay as "a kind of *papier collé* in which his own lively observations and commentary sit side by side with materials drawn from a multitude of printed sources" (2002, p. 8); and Michael Duszat, in the only book-length study of Weinberger so far, points out that his essays rely on "discontinuity and fragmentation rather than narrative or argument" (2014, p. 23). Some of the facts Weinberger includes in his essays seem entirely fictional, although in an interview with the poet Forrest Gander he insists that the only rule he set himself for writing is that "all the information is verifiable, nothing is made up." (2005) A quick online search proves that this holds true for the subject of the essay which I am going to discuss now, *Naked Mole-Rats*.

The eponymous creatures are a species of furless burrowing rodents, native to East Africa. Most readers of the collection *Karmic Traces*, in which this short essay is included,²⁶ have probably never heard of this species, and that is something Weinberger seems to have anticipated. The fact-assembling narrator in *Naked Mole-Rats* addresses an implicit reader with no prior knowledge. The mode of teaching/learning is already prevalent in the text's title. The straightforward presence of the essay's subject in the heading is reminiscent of encyclopaedic articles which *Naked Mole-Rats* both imitates and overwrites. The patterns of imitation are easily identifiable. Apart from the text's title, its length of no more than two and a half pages is indicative of an encyclopaedic model, and so is its density with information and the lack of an essayistic first-person narrator, to which I will return later. The essay informs us about the naked mole-rats' habitat, about how they dig, procreate, sleep, and repel natural enemies. It includes, in other words, facts that all encyclopaedic entries deliver and which could be easily researched as they are freely accessible online. Weinberger does not veil his use of such encyclopaedic sources. In the bibliography that accompanies *Karmic Traces* he lists a science book about naked mole-rats.

Relying on short sentences, the essay begins in a style that is reminiscent of the simple, seemingly objective voice of scientific writing:

²⁶ *Naked Mole-Rats* was first published in 1996 in Eliot Weinberger's collection *Written Reaction. Poetics, Politics, Polemics*.

Naked mole-rats have no fur, but their lips are hairy. Their pinkish mottled skin is loose and hangs in folds, like something that has lost a great deal of weight, the easier to squirm through their narrow tunnels. Incisors protrude from their mouths like pincers, the only feature of their undefined faces. One naked mole-rat can fit across your fingers, its tail dangling down. They have been under the earth for at least three million years. (Weinberger, 2000, p. 53)

In focussing on the naked mole-rat's physical appearance Weinberger applies descriptive exactitude. Every sentence adds at least one bit of information. Yet, in comparison with the more objective use of language in genuine encyclopaedic texts, Weinberger does not limit the lexical field to words that refer directly to the animal. Information is both allocated and poeticised as the essay makes use of two comparisons in very short sequence. The first one illustrates the peculiar look of loose skin without being too specific about it, whereas the following comparison links the naked mole-rats' teeth to pincers. In comparing the animals' features to mechanical tools it hints at the functionality of their bodies and helps to enliven the zoological facts poetically as it transfers the unknown into an imagery that the human reader can relate to.

Following this close up of the naked mole-rat, Weinberger introduces some basic information about the species' habitat and habits. By repeating the same sentence structure over one paragraph (five out of six sentences begin with the words 'they' or 'their' – in the whole essay this syntactic structure reappears 25 times), he initiates an enumerative mode:

They never surface. They are blind. Their world is not a labyrinth, but a straight tunnel, a mile or two long, with innumerable cul-de-sacs branching off, and certain larger chambers. They live on the tuberous roots that grow towards them. As many as three hundred inhabit a colony, moving a ton of dirt every month. They have a caste system, tripartite like the Indian. (Ibid.)

Instead of familiarizing us with the naked mole-rat, this stylistic compression of facts makes them seem mystic to the point that the facts appear to be a product of the imagination. This particularly happens due to the use of such words as 'labyrinth', 'chamber', 'colony', and 'caste system' which are all derived from a lexical field that we otherwise associate with ancient and traditional cultures. By mentioning early on that the species has been under the earth for "three million years" (ibid.) Weinberger reinforces this connection. His narrator introduces a political analogy, as he enables us to see similarities between the Indian caste system and the social structure of the mole-rat community. In the act of juxtaposing two highly different topics there resonates a practice of assemblage as we know it from the World Wide Web. Websites, Twitter feeds, and other social media applications connect previously

distinct persons, themes, and objects. Elsewhere in *Karmic Traces*, Weinberger's narrator discusses such overlapping presentation of knowledge in the computer age. He argues that "an unprecedented precision of measurement and description has only made the universe far more mysterious" (2000, p. 100). As opposed to the Eurocentric comparisons in Humboldt's *Ansichten* – of the type: at the cataracts of Rentama, the river Orinoco is "kaum gleich der Breite unseres Rheines bei Mainz" (2004, p. 175) / "barely equal to the breadth of our Rhine at Mainz" (2014, p. 119) – that popularise geographical knowledge among Humboldt's German readers, Weinberger's comparison with the Indian caste system opens up the otherwise closed system of meaning to a plurality of different value systems and perspectives, to the effect of disorientation, a chief sensation of the empirical sublime. In other words, the more you read, the vaster the universe gets. Unlike in Humboldt where A equals B, analogy in Weinberger's essays is used merely as a device devoid of its explanatory function. Thus, Weinberger establishes connections or relationships of perceived similarity but in doing so steps sideways rather than towards a higher point from which a totality can be viewed.

The narrator's reclusiveness plays an important part in this. In contrast to all essays discussed in the previous chapters, he remains so far in the text's background that we can only hear his voice. He refrains from acting as an authoritative interpreter of the natural world and limits his role to listing more and more information. Michael Duszat uses the term "hyper-description" (2014, p. 47) to capture the excess of data in *Naked Mole-Rats*. In the last third of the text, information becomes even denser. When the essay dwells on the naked mole-rat's voice, for instance, it challenges the reader's familiarity with encyclopaedic patterns of knowledge:

Naked mole-rats make at least seventeen sounds: soft chirps and loud chirps, high-pitched and low, tooth-grinding, trills, twitters, tongue taps, sneezes, screams, hisses, grunts. Different sounds for when they bump into each other, when they piss, when they mate, when they're disturbed, alarmed, wounded, when they shove each other, when they meet a foreigner such as a beetle, when they find food, when they can't find food. (Weinberger 2000, p. 54)

Instead of describing or transcribing the different sounds those animals produce, Weinberger's narrator creates an alliterative pattern in which "tooth-grinding" is followed by "trills, twitters, tongue-taps" (cf. Duszat, 2014, p. 48). As a consequence focus shifts from the informative purpose of scientific fact-gathering to the sound of language. By overloading the text with information that he poeticises, Weinberger questions the actual value of facts and reveals the abyss of the empirical sublime. The

role of the narrator in this essay is limited to choosing and compiling images, words, and facts which he sometimes appears to lose control over. Then, he gets carried away into poetic excess. Yet, the absence of a more active speaker results in a shift towards the materiality of the animal itself that seems noteworthy.²⁷ There are only two occasions at which Weinberger alludes to a human presence. The first one is when he mentions the mole-rat's size, in the passage quoted above: "One naked mole-rat can fit across your fingers, its tail dangling down". The animal's size is not only outlined in relation to the human body. Weinberger goes on to imagine a direct encounter between human and nonhuman being. By using the second person singular, or the 'generic you', Weinberger could either refer to an unspecified person or to the reader.

In the second occasion, however, contact is made more explicit. One sentence from the end, Weinberger's narrator suddenly and unexpectedly deploys information about the concrete environment in which his essay is set. "Sometimes a naked mole-rat will suddenly stop, stand on its hind-legs, and remain motionless, its head pressed against the roof of the tunnel. Above its head is the civil war in Somalia. Their hearing is acute." (2000, p. 55) In its historic and geographic situatedness the penultimate sentence contrasts strongly with the rest of the text. We learn about a specific time frame, the 1990s, and about a determined location, Somalia. This disruption of the previous timelessness is initiated by a particular animal that stops and sits up. It suddenly becomes alert and so does the reader. The movement of straightening marks a break within the whole body of text. As the mole-rat approaches the tunnel's roof it also approaches the reality above its secluded subterranean world. The following sentence opens this world even further to the environment outside by providing information vital to place-based nature writing: "Above its head is the civil war in Somalia". This sentence is central to questions regarding the essay's point of view as it pushes the boundaries of the narrated world. Weinberger seems to suggest that a glimpse of the human sphere is suddenly revealed to the animal through its alertness. A membrane that links beneath and above is briefly opened and closed again, but that one short sentence makes the reader see those two spheres in conjunction. The civil war in Somalia is indicative of mutual destruction which corresponds to the animal's violent clashes – when "two colonies of naked mole-rats tunnel into each other, their warriors fight to the death" (ibid., p. 53). In this context the use of the term 'civil

²⁷ Duszat emphasises that "the representation of animals is an important theme running through all of Weinberger's writing." (2014, p. 45) and Hutchinson calls his animal pieces "something of a Weinbergerian sub-genre" (2002, p. 8).

war' attracts attention. It challenges our understanding of what is civil and what is not, thus questioning the human-animal divide like the mention of the caste-system. Duszat also highlights this contrasting function concerning the essay's last paragraph:

The monotonous flow of information, even though it has already become an ironic, hyper-objective parody of encyclopaedic writing, offers a way to neatly integrate an element of horror into an otherwise entertaining and informative text. The audience may now even feel guilty because they are appalled at the naked mole-rats' behaviour, while at the same time they silently accept the more appalling behaviour of their own species [...] (2014, p. 52).

Whereas the essay's first two-thirds were limited to the world underground, the last paragraph evokes a world much larger than the rodent's burrow. We only catch a fleeting glimpse of this world, but from this sentence it is possible to conclude that it is split into two halves. The border that separates the subterranean world inhabited by rodents like the naked mole-rat from the human sphere runs along the earth's surface. By setting the naked mole-rats' habitat side by side with the internecine war raging above, the essay suddenly frames the creatures in a new way. In their tunnel world they dwell naked and blind like embryos. Protected by their burrow the naked mole-rats live a secluded life. Yet, even if the human environment lies outside of their sphere of dwelling, sound travels swiftly across boundaries. This spatial relation is highly intertextually charged. It brings to mind other literary habitats, first and foremost the burrow inhabited by the creature in Franz Kafka's *Der Bau* (*The Burrow*; written 1923-24, published posthumously in 1928). As distinguished from the creature's struggle to accommodate itself in the burrow, Weinberger's rodents are well adapted to their environment. But they share some other characteristic features with Kafka's creature, particularly their sensitivity to sounds. Although Weinberger refrains from adopting the naked mole-rat's perspective, he demonstrates that the species is capable of taking the active role of the observer. This becomes apparent in its movement of stopping and pressing its head against the roof of the tunnel system to hear the sound of humans. The essay's last sentence stresses their ability to listen: "Their hearing is acute." The naked mole-rat is, in other words, capable of directing its attention towards us, the human observers. In crediting the naked mole-rat with this kind of agency, Weinberger deviates from the traditional distribution of roles implicit in encyclopaedic entries. We do not only read about animals, they also read us as they are alert to external factors.

By interweaving descriptions of human and animal behaviour, Weinberger implicitly asks us to reconsider assumptions about our superiority. Yet, he also chal-

lenges the notion that gathering information inevitably results in making sense. Even though we may know more about naked mole-rats than we did before, we also have more questions. In setting side by side a panorama of the naked mole-rat's habitat and a very brief reference to the civil war in Somalia, we are left wondering in which ways they are connected. When Weinberger's narrator suddenly mentions the civil war, he abandons a mindscape that previously seemed very hermetic. The result is disorientation because the act of juxtaposing two very different impressions lacks clearly determined ways of directing us towards an interpretation of the world.

David Foster Wallace, *Consider the Lobster*

Although David Foster Wallace is best known for his novels, most notably his over 1000 pages long *Infinite Jest* (1996), the two essay collections published before his untimely death in 2008 may ultimately turn out to be equally influential while far less time consuming to read. Both in *A Supposedly Fun Thing I'll Never Do Again* (1997) and *Consider the Lobster* (2005) Wallace turns towards a supersaturated US-American consumer culture, featuring postmodern human subjects struggling with the overabundance of choice options to which they are sensitive and addicted at the same time.

Consider the Lobster, the title-giving essay of the second collection, was first published in summer 2004. It originates in a commissioned piece of journalism. Having been asked by *Gourmet* magazine to act as their reporter, Wallace covers the 2003 "Lighthouses, Laughter, and Lobster" themed Maine Lobster Festival. As opposed to *Naked Mole-Rats*, time and location are mentioned right in the beginning: "The enormous, pungent, and extremely well-marketed Maine Lobster Festival is held every late July in the state's midcoast region, meaning the western side of Penobscot Bay, the nerve stem of Maine's lobster industry" (Wallace, 2011, p. 235). From the start lobsters are placed into and depicted in the context of American consumer culture. Particularly in the first pages, Wallace's writing is mainly occupied with recreating the impression of overwhelming product diversity as his narrator lists many of the goods he encounters while roaming the festival venue's food stalls. At a large cooker near the entrance, for instance, he spots "lobster rolls, lobster turnovers, lobster sauté, Down East lobster salad, lobster bisque, lobster ravioli, and deep-fried lobster dumplings" (ibid., p. 236). Making use of an enumerative mode, Wallace confronts his readers with a menu-style list: no explanation given.

The technique of list-making in essay writing, as Duszat points out in his study of Weinberger, temporarily distracts the readers from the essayistic narrator and directs their attention towards the material world. We have already seen this dynamic at play in the aesthetics of collecting. The potential that lies in enumerations is their ability to create awareness that "things exist independently from 'us'" (Duszat, 2014, p. 37). Yet, unlike encyclopaedic lists of birds, flowers, and bugs that are usually meant to showcase the variety of species, Wallace's narrator lists all sorts of processed lobster meat, not living lobsters. In doing so, he creates a panorama of food-related choice options and uses the text itself as an archive for consumer culture. This becomes even more apparent when he goes on to enumerate types of lobster representations he spots on the festival ground: "lobster T-shirts, and lobster bobblehead dolls and inflatable lobster pool toys, and clamp-on lobster hats with big scarlet claws" (Wallace, 2011, p. 236). The Maine Lobster Festival is framed as a hot spot of food tourism with "Disneyland-grade queue[s]" (ibid., p. 239) and the feeling that pervades Wallace's essayistic vision of this place is one of alienation. Although his first-person narrator visits the festival to take part in the activities, he scrutinises them from an inner distance, asking himself why "so many people's idea of a fun vacation is to don flip-flops and sunglasses and crawl through maddening traffic to loud, hot, crowded tourist venues" (ibid., p. 240 n. 6). The narrator observes the festival setting from the analytical position of an outsider. He repeatedly refers to his role as a journalist, calling himself "your assigned correspondent" (ibid., p. 242 n. 8) and in doing so exposes and ironizes the role of the ever-questioning journalist who is fully immersing himself but incapable of reaching beyond the surface of his surroundings. Besides, these meta-textual comments serve the function of revealing the conditions of textual production as they shed a light on the capitalist system in which Wallace 'the writer' is paid to make an experience on which he reflects in a magazine that addresses readers who like to consume food which is not produced to care for basic human needs but to both stimulate and saturate other appetites.²⁸

Early on in the essay he notes that at the festival lobsters sell at prices that are not higher than the average "supper at McDonald's" (ibid., p. 239), and in a further step concludes that the festival's goal is the "democratization of lobster" (ibid., p. 238). The result is a generic event of mass consumer culture. Wallace, however, does not condemn this culture openly. Whereas explicitly ethical discussions of animal

²⁸ On Wallace's referring to his role as a journalist in his nonfiction see Giles, 2012, p. 16.

rights issues, such as Jonathan Safran Foer's nonfiction book *Eating Animals* (2009), are concerned with the problematic links between mass consumption and factory farming, Wallace introduces ethical issues rather covertly. His essay is mainly concerned with the conditions under which we pose ourselves ethical questions. The context in which this essay operates and on which it reflects is one of consumerism, big data, and overpopulation. Before the narrator actually asks "the all but unavoidable" question: "Is it all right to boil a sentient creature alive just for our gustatory pleasure?" (Ibid., p. 243), several pages have been filled with detailed depictions of the many lobster-related products available at the fair, some basic instruction-style reflections on how to cook lobsters, and a detailed encyclopaedic introduction to the living species. Wallace's style reveals an essayistic mind that is obsessed with information, bordering on data excess, continually pointing to the cultural context in which his thinking takes place. His syntax abounds in embedded subordinate clauses and his adverb-laden descriptions are indicative of the tendency to incorporate ever-vaster amounts of information into his writing.²⁹ Yet, unlike earlier nature essayists, such as Humboldt and Jünger, who were still capable of deducing a meaningful interpretation about the interconnectedness of the world from the information they had gathered, Wallace is left with many facts but no answer to his ethical question. He seems to be paralysed by the conditions under which these questions are considered. Starting by introducing the lobster zoologically in a passage that resonates with the information essay's density of facts, he states:

Taxonomically speaking, a lobster is a marine crustacean of the family Homaridae, characterized by five pairs of jointed legs, the first pair terminating in large pincerish claws, used for subduing prey. Like many other species of benthic carnivore, lobsters are both hunters and scavengers. They have stalked eyes, gills on their legs, and antennae. There are a dozen or so different kinds worldwide, of which the relevant species here is the Maine Lobster, *Homarus americanus*. The name 'lobster' comes from the Old English *loppestre*, which is thought to be a corrupt form of the Latin word for locust combined with the Old English *loppe*, which meant spider. [...] All this is right there in the encyclopedia. (Ibid., p. 237)

In reproducing zoological, etymological, and socio-historic knowledge on lobsters, the text incorporates content elements reminiscent of encyclopaedic entries. In a characteristically postmodern turn, the narrator consciously points to this similarity in the passage's very last sentence. Wallace's essay expands the rhetorical side of animal depictions, using comparisons to enliven the facts. Drawing on zoological re-

²⁹ Giles points to the capitalist context again in that the "excess of adjectives and pop-culture neologisms in Wallace's quirky prose [...] testifies to a landscape where objects have become commodified and commercially overdetermined [...]" (Giles, 2007, p. 334).

search, Wallace consequently approaches the question whether lobsters feel pain or not. Wallace's narrator is caught in between the diametrically opposed PETA activists' "Being Boiled Hurts" (Ibid., p. 244) demonstrations against the festival and the organizer's own "Test Your Lobster IQ quiz". The quiz features the statement that the "nervous system of a lobster is very simple" (Ibid., p. 245) and lacks the area which in the human brain causes pain. Undecided where to position himself, the essayistic subject assembles more information about the lobster's ability to experience pain. But, he also points out that one cannot know for sure how lobsters experience the act of being cooked alive. Since "pain is a totally subjective mental experience, we do not have direct access to anyone or anything's pain but our own" (Ibid., p. 246).

The human ability to empathise with others, however, enables us to imagine how pain might feel for crustaceans. At first, pain is not framed ethically but assessed from a neurological standpoint: if it does not hurt the lobster, cooking him could seem ethically less 'wrong'. Yet, Wallace strikes up comparisons to humans in the depiction of the lobsters' struggle while being cooked: it tries to "hook its claws over the kettle's rim like a person trying to keep from going over the edge of a roof" (ibid., p. 248). Such dramatization may be anthropomorphising, but it indicates an attempt to comprehend the animal's perception after the pure data does not deliver. Nevertheless, Wallace's narrator argues against a "PETA-like screed" (ibid., p. 253) because to him "animals are less morally important than human beings". When it comes to defending this belief, he admits:

I have to acknowledge that (a) I have an obvious selfish interest in this belief, since I like to eat certain kinds of animals and want to be able to keep doing it, and (b) I haven't worked out any sort of personal ethical system in which the belief is truly defensible instead of just selfishly convenient. (Ibid.)

Even though we may disapprove of the suffering of nonhuman animals, this statement reveals that in the end data alone is insufficient when it comes to ethical standpoints. Wallace exhibits the human tendency to block out facts in order to continue a particular diet. Despite all the information we have about the neurological pain system of lobsters, we still have to make our own decisions. Making this inner conflict visible is a strategy of giving back agency to an essayistic subject caught in maze of data, calls-to-action, consumer choice, and perpetual high-frequency attacks on the senses and the mind.

Consider the Lobster also incorporates the overabundance of data with which Wallace is trying to cope into its formal outline. The essay features 21 footnotes which reflect and represent the complexity of a world that provides us with a mass of

allegedly interconnected pieces of information, and still lacks any point of completion. In confronting us with more than just one layer of text, footnotes recreate the basic principle of hypertexts. We have seen footnotes in earlier nature essays. In Humboldt's *Ansichten der Natur*, for instance, they at times exceed the main body of text in volume. Whereas footnotes in *Ansichten* add further observations on nature's overall connectedness, Wallace uses them to introduce random bits of information that do not come together in a greater system of knowledge. Unlike hyperlinks that tend to distract our attention while reading, as they lead us away from the main body of text towards other websites, footnotes slow down the reading process. They can, thus, be understood as an altered form of essayistic digression and as a structure that reflects the experience of distractedness that has proven so central to the digital age. Josh Roiland remarks that footnotes illustrate Wallace's "psychic inability to chronicle and interpret all of the stimuli he encounters during his reporting" (2012, p. 34) and Ira Nadel points out that footnotes are the "visual expression and confirmation of nonlinear thinking." (2012, p. 219) In addition, footnotes challenge the decision-making facility of the reader. To read *Consider the Lobster* means to have a choice: we can decide whether to skip the footnotes or to engage with them and in a bigger sense with the essay's complexity. It would have been easy to incorporate the information included in the footnotes in the main body of text. The absence of footnotes is, in fact, quite often used to characterize, and sometimes even to mock, essayistic writing (see Kaube, 2014, p. 60). Wallace's decision against incorporating this information reflects his ongoing play with patterns of scientific discourse. Scientific footnotes traditionally serve the purpose of referring to additional reading material, or hint at sources. They are, accordingly, meant to objectify knowledge and open it to scrutiny. As a former student of philosophy and math Wallace was well acquainted with scientific writing. His slightly obsessive use of technical terms also has to be read in this context. Nadel, however, stresses that although Wallace's use of the footnote playfully invokes scientific methods insofar as it "corroborates, corrects, or criticizes material in the body of the text" (2012, p. 226), it also acquires poetic meaning. In the context of an aesthetics of the empirical sublime, footnotes constitute a textual structure that mimetically represents the complexity of data and the feeling of being trapped.

Andreas Martin Widmann, *Mind Gardens*

To put Andreas Martin Widmann in line with David Foster Wallace and Eliot Weinberger is to include the odd man out. Widmann is a contemporary German writer with one published novel to his name so far. His five-page essay *Mind Gardens*, however, originally written on occasion of an exhibition in 2013,³⁰ and later published by the Leipzig-based literary magazine *Edit*, fits well into the row of digitally-aware nature essays as it reflects on the experience of using Google Street View and makes it accessible in the process of writing. Data, in this case, refers not so much to raw information as to processed interconnected images. Widmann's engagement with digital nature representations echoes Morton's assessment of nature perception in the present age: "We have gained Google Earth but lost the world." (2010, p. 30) Interactive, digital nature representations give us a sense of nonhuman realms while being essentially man-made. Along with Google Earth, Google Street View in particular has helped to delocalise data as it made pictures of most roads and landscapes you can drive through accessible to people regardless of their actual whereabouts. These applications make it possible to enact the transnational aerial perspectives that Humboldt had only imagined two hundred years earlier. Yet, Google's 360 degree views differ from prior visions of connectedness, in that they are not attached to the actions of a singular person anymore. The Google Street View cosmos is created in a process based on the division of labour: it is made out of footage shot by numerous different camera teams, and used by many different users. As opposed to the holist visions of earlier German nature essayists – Humboldt, Goethe and Jünger, in particular – who relied both on data they themselves had collected and on an authoritative act through which the global interconnectedness was made visible to the reader in the guise of an ordered cosmos, the contemporary user of Google Street View navigates a world that is inherently interconnected but lacks a rational centre of meaning.

Mind Gardens explicitly addresses the fact that the act of measuring the world peaks in the interplay between "Suchmaschine, Kartenplandienst, der Luftperspektive von Google Earth und dem Kameraauge von Street View" / "searchengine, route-mapping device, the aerial perspective of Google Earth, and the camera-eye of Street View" (2013, p. 92. The English translations are all my own). But, more than that, the essay also demonstrates ways in which this interconnected world falls short. When we

³⁰ The exhibition *A Secret Garden*, CIAT Berlin 08.06-22.06.2013, was a collaboration between Widmann, Alexandra Heimes and the artists Max Sudhues and Antonia Low.

enter the digital models of the world in search of real places they prove to be no less imaginary than Humboldt's holist cosmos. The essay's opening scene demonstrates in which ways this causes disorientation as it takes us in *medias res* into the Street View version of London:

Ungefähr auf halbem Weg zwischen Universität und Pension verirrte ich mich in einem Dickicht aus Sackgassen und Lieferzufahrten. An Garagentoren und Hintereingängen ging es nicht mehr weiter oder die Fahrbahn wurde abgeschnitten, als wäre auch die Welt hier plötzlich zu Ende. [...] Während ich an einer violett gestrichenen Fassade den Blick kurzfristig nach oben lenkte, sprang der Himmel plötzlich auf und das Haus zeigte sich in leuchtenden Farben, doch ich war gleichzeitig weiter geradeaus gefahren und mit einem raschen Schub, in dem sich alles um mich verwischte, glitt ich einige Meter an geparkten Autos entlang nach vorne und alles war wieder grau und trüb.

About halfway between university and pension I got lost in a thicket of blind alleys and delivery entries. At garage gates and back entrances it was impossible to move on or the carriageway was cut off as if the world had also suddenly come to an end. [...] While I was briefly gazing at a purple-painted front, raising my field of vision, the clouds suddenly opened up and the house appeared in glowing colours, yet I had simultaneously continued straight ahead and with a quick thrust in which everything around me blurred, I slid a few meters forwards along parked cars and everything was grey and dull again. (Ibid., p. 90)

Widmann's first-person narrator struggles to find his way through the city. Together with him we are able to witness how Street View works. His difficulties in exploring the area at his will are illustrated by a labyrinthine syntax together with sudden shifts in focalization, resulting in galvanic movements. Hints at quickly changing conditions of illumination reinforce the impression of alienation that characterizes the beginning of a text that evokes the virtual city as a deep impenetrable environment, in which it is easy to get lost.

Although the essay's beginning deliberately misdirects our impression of where the narrator is located, we soon learn that the subject speaker is not actually out there, walking the streets. He explores London from the distance of his office desk in Frankfurt, where he is employed as a copywriter. Evoking the surface-obsessed world of the advertising industry, where everything is potentially significant, Widmann frames this Google pilgrimage in a working world setting. Widmann's narrator obviously struggles with the symptoms of alienation that Friedrich Schiller and Karl Marx, among others, famously identified as the determining condition of the modern working life. While sitting in his office, he discovers Google's Street View mode as an "effizientes Medium zur Wirklichkeitsflucht" / "efficient tool for acting out escapism" (ibid., p. 91). The actual physical location of the office functions as an anchor or a starting point from which the essay moves into different imaginative

worlds. Presence and absence are vital, as *Mind Gardens* draws on a hybrid spatial constellation, characteristic of the digital age.

What makes this essay rather complex is that we become immersed in quickly shifting spheres of the imagination. Widmann's narrator juxtaposes images and impressions from heterogeneous localities. On a first level there is the office space in Frankfurt, where the narrator is actually sitting and using his laptop. A counter-model to the narrow office space lies in the world of the imagination. We learn about a future novel in the making. The essay reproduces a short excerpt from this unfinished text, which is set in a fictional park in a fictional version of Notting Hill, at a place called Eden Square with no equivalent in the actual A-Z street atlas. This mise en abyme style inlay opens a second spatial level. Widmann's novelistic protagonist, a middle-aged customer consultant, is sent to London by his agency, where he becomes obsessed with the badminton game of two adolescents he observes in an enclosed private garden. He acknowledges that inscribed into this setting is "eine Erlösungsvision" / "a vision of Redemption" (ibid., p. 94), as the garden represents a counter-model to the suburban middle-class life the protagonist leads at home in Germany. Like Widmann's narrator his protagonist is influenced by feelings of alienation from the working environment and a quest for a different life. This results in a state of mind for which inner disunity matters more than connectedness. The disorientation, implicit in the opening scene, is thus both empirical and symbolic in that it resonates with the narrator's feeling of living the wrong life.

In this context the essay's intertextuality proves insightful. In its phrasing, particularly in its emphasis on becoming lost halfway through – "Approximately halfway between university and pension³¹ I got lost in the thicket of blind alleys and delivery entries" – the opening passage echoes the beginning of Dante's *The Divine Comedy* (*La Divina Commedia*, written approx. 1308-1321, posthumously published in 1555):

Nel mezzo del cammin di nostra vita
mi ritrovai per una selva oscura,
ché la diritta via era smarrita.

Halfway along the road we have to go,
I found myself obscured in a great forest,
Bewildered, and I knew I had lost the way. (2008, p. 47)

Getting lost in Dante's case refers to the path of life. In keeping with the tradition of medieval allegorical depictions of faith as a lifelong peregrination, Dante's journey

³¹ The word 'Pension' functions as a verbal pun that is lost in translation as in German it can mean both 'lodging' and 'retirement'.

through the circles of Heaven and Hell is meant to showcase his attempt to get closer to God. Reading *Mind Gardens* as a response to Dante is reasonable insofar as Widmann's narrator frames his meandering movements through London in the context of a search that resonates with Dante's quest for salvation. Towards the end of the text Widmann openly reveals his intertextual play with *The Divine Comedy*. In the second endnote – the essay includes three of them – the narrator points out that the yellow Pegman character who indicates his position on the virtual map occupies a similar function as Virgil for Dante, leading him through the Google Street View scenario (cf. 2013, p. 95).

Annoyed and exhausted by the mind-draining work in the agency, Widmann's essayistic subject speaker in Frankfurt roams the streets of Google Streetview's London in search of the private park in Notting Hill he himself has invented. Instead of working on his novel he visits its setting, while he is actually supposed to work. What complicates Widmann's game with different 'mind gardens' is that he uses Google's application in order to search for the square that originally served as prototype for the entirely fictional Eden Square. The essay draws us into these different imaginative spaces by quickly changing levels between the novelistic setting, the empirical location in Frankfurt and Google's virtual representation of London that are complexly interrelated within the framework of the essay. In setting remote locations in relation to each other, *Mind Gardens* reflects the interconnectedness of a highly networked world. Despite the seemingly easy accessibility of the digital representation of London, it often leaves the narrator feeling disoriented. The empirical sublime, most notably, is experienced in moments of encounter with the natural world.

When he finally discovers a park which strongly resembles his imagined place, he notes that within the digital representation seasonal continuity is missing. Google Street View has created a new collage-version of London, made out of panorama photographs of the city's natural environment:

In dem Park, den ich schließlich unweit von Notting Hill Gate fand, war es aber auch Frühling, Sommer, Herbst und Winter zugleich. Eine Kastanie, deren ausladende grüne Krone ich gerade noch sah, hatte im nächsten Moment überhaupt keine Blätter mehr und streckte die kahlen Äste von sich.

In the park, which I finally found in the vicinity of Notting Hill Gate, it was simultaneously spring, summer, autumn and winter. A chestnut tree whose sprawling green crown I had only just seen, from one moment to the next had shed all its leaves and was now stretching its bare branches into the air. (Ibid., p. 92)

Widmann's narrator is struck by the inherent asynchronicity of the square he sees on his screen. Google Street View's seemingly complete replica city is unsettling in two aspects. As opposed to the hermetic worlds of video gaming, it still involuntarily exposes the seams that divide the bits and pieces of footage used to build its image of the real world. The result is a mash up version of London that is as artificial as any fictional world and can be no more than a minor substitute for the real environment. Time is compressed in this digital space where pictures of heterogeneous time periods and seasons coexist. So, on the one hand Google's application allows us to manoeuvre through a space in which the natural weather conditions are changing much faster than normally, and alters thus the speed of seasonality. And on the other it slows down social processes to the point of freezing them which results in a city that is staggeringly undramatic. Widmann notes, for instance, that the streets of Google are inhabited by people who remain in the same position all the time as they wash their cars or carry home their shopping, recalling "den Schrecken von Pompeii" / "the horror of Pompeii" (ibid., p. 93). There simply is no progress in their motions, whereas the user of Street View often rushes through the streets.

This asymmetry resonates with postmodern experiences of "time-space compression", as articulated by David Harvey in *The Condition of Postmodernity* (1990). It also represents a dystopian state of detachment from our environment. Nothing ever has an impact. Yet, Google's vision of place at the same time is utopian in other aspects: Google Street View has created a non-existent fictional space in which the weather conditions are as mild and benevolent as in Paradise. In its cosmos, Widmann notes, there are no severe weather conditions. Nature is tamed because:

Schnee und Eis haben keinen Platz darin, Gewitter, heftige Regenfälle oder Hagelstürme erst recht nicht. Insofern scheint das Klima hier die gegenteilige Entwicklung durchgemacht zu haben wie jenseits des Bildschirms, wo sich, wenn man manchen Zukunftsforschern glauben will, zwischen langen, arktischen Wintern und höllisch heißen Sommern bald nur noch die unterschiedlichen Unwetter und Naturkatastrophen abwechseln werden.

Snow and ice have no place in it, thunderstorms, heavy rain or hailstorms even less. In this respect the climate seems to have gone through the opposite of what change is happening on this side of the screen, where, if you decide to believe what some futurologists propose, in between long arctic winters and hellish hot summer only the different tempests and natural disasters will take turns. (2013, p. 93)

Google Street View adopts elements of Edenic nature, but, it also defamiliarises them, most notably by creating a mash up seasonality, which causes alienation and foreshadows a development our climate might take if we carry on regardless in our

harmful habits. The experience of detachment, therefore, applies both to the working environment and to the digital representations of urban nature. On a formal level the text also stages the experience of chaos by enacting a delocalisation of narrative points of view.

In the very last paragraph, Widmann's narrator notes that around the square in Notting Hill older images have been replaced by pictures that were shot in 2012, at exactly the time when he himself was walking through London. In those new views, he allegedly sees himself, "wie ich die Straßen entlang gehe auf der Suche nach einem Garten, den es nicht gibt" / "as I follow the streets in search of a garden that does not exist." (Ibid., p. 94) In a similar manner as in Weinberger's *Naked Mole-Rats*, shortly before the end Widmann dissolves the spatial order previously established by changing levels as he re-creates a moment of disorientation that is typical of the empirical sublime. The desire to escape the narrowing working world peaks in this act of crossing the boundaries between separate narrative worlds. This is made possible because Widmann drives the process of splitting up and delocalising the narrative positions to excess. Is it the escape into a better world the narrator has longed for? We cannot know because here the essay ends.

Nature essayists before the digital revolution frequently used data to boost their aesthetics of measuring, mapping, collecting and connecting with empirically verifiable information in which they grounded their reasoning. Contemporary essayists notably struggle to find a similar meaning in numbers and facts. Although their texts feature bits of knowledge of an unprecedented scale, they often fail to direct the reader towards a particular interpretation of the global environment. As opposed to explorers like Humboldt or Darwin who were still capable of deriving an overall explanation of the natural world (meaningful interconnectedness or evolution) from the data they collected, these contemporary nature essayists seem to gather facts without being able to interpret them within a greater context. In spite of the great quantities of information, they are unable to get a clearer picture of their environment. In Weinberger's essay the human observer is strikingly absent from the naked mole-rats' burrow, whereas Wallace does not observe lobsters in their natural habitat but encounters them in a consumer's environment, and Widmann explores urban nature mainly in a virtual setting. In keeping with Morton and Hayles, all three essays can be understood as examples of texts that respond to a lack of pristine nature experiences by exhibiting the ways in which humans have turned the material world into a thick

interconnected ‘mesh’ of data. The overwhelming effects of data-density are often represented through the empirical sublime. Wallace and Widmann both depict an urbanised world in which nature-experiences have previously been processed and charged with deep information patterns. But exposing the secondary nature of nature is a way of reframing the natural world. Weinberger and Wallace do this by partially adopting the style and outline of encyclopaedic articles, and Widmann by observing nature through Google Street View’s digital eyes. Although all three essayists work in one way or the other with data, their writing denies the notion that in facts is the interpretation of the world. Instead they stress discursive fractions and seams rather than creating a coherent unity. Even though the three texts apply elements of collage-style aesthetics none of them fulfils the ideals uttered by Heise concerning an eco-cosmopolitanism that offers insights into transnational network structures. Linking localities and discourses to each other, Weinberger, Wallace, and Widmann create textual networks in which their narrators get lost rather than find meaning. In their writing they stage this process of disorientation. By converting the human struggle with data into an aesthetics of the empirical sublime, they make experiences of detachment accessible in writing. Mistrusting authoritative explanations, they engage the reader in a discussion on what it means to relate to nature in the twenty-first century. Focalization and framing of being lost are aesthetic strategies that potentially are capable of giving back agency to the essayistic subject.

3. “Mother Nature’s Son”:

The Metaphysical-Spiritual Episteme

In the previous chapter we have seen how essayists adopt encyclopaedic-scientific writing strategies as an analytical and organizing tool to stage their involvement in and understanding of different environments and agencies. While this encyclopaedic-scientific take on nature was the vehicle of empirical findings and verifiable knowledge, endeavours to express other forms of truth have resulted in different writing strategies. Where measurements, data, and facts fail to give us a sense of the personal significance of nature, a different epistemological mode is triggered. I have already discussed elements of the aesthetics brought forth by a spiritual-metaphysical epistemology, for instance, how writers used colour adjectives to perform the experience of superabundance, or how descriptions of a sublime or a redemptive nature encounter were employed to reveal a greater spiritual depth. In addition, this chapter introduces three central aesthetic structures of the spiritual-metaphysical episteme. It begins with an introduction to epiphanic aesthetics, followed by a discussion of the ways in which essays stage and unsettle the process of making sense of the natural world as an ironic or elegiac play with words. Finally, it looks into tales of transformation experiences.

3.1 Epiphanic Moments and Revelations: J.A. Baker’s *The Peregrine* and Kathleen Jamie’s *Peregrines, Ospreys, Cranes*

Epiphanies form an integral part of the aesthetic repertoire of the nature essay. Think for instance of Thoreau’s contemplations of transcendence in *Walden*, Peter Handke’s epiphanic experiences in *Die Lehre der Sainte-Victoire* (*Lesson of Montagne Sainte-Victoire*, 1980), or Ernst Jünger’s celebration of encyclopaedic wholeness in *Subtile*

Jagden. In their writing these essayists draw on epiphanic aesthetics to capture moments of spiritual and scientific meaning. But what exactly is meant when we talk about 'epiphanies'? By way of definition David Lodge explains that

[a]n epiphany is, literally, a showing. In Christian terminology it denotes the showing of the infant Jesus to the three Magi. James Joyce, apostate Catholic, for whom the writer's vocation was a kind of profane priesthood, applied the word to the process by which a commonplace event or thought is transformed into a thing of timeless beauty by the exercise of the writer's craft: 'when the soul of the commonest object seems to us radiant', as his fictional *alter ego*, Stephen Dedalus, says. The term is now loosely applied to any descriptive passage in which external reality is charged with a kind of transcendental significance for the perceiver. (1992, p. 147)

The word 'epiphany' according to Morris Beja refers to both the actual experience of "a sudden spiritual 'manifestation' – a showing forth, an illumination, a revelation" (1971, p. 15) and to the rhetorical device, a descriptive textual passage that infuses experiences with meaning (see also Nichols, 1987, p. xii). In order to detect the latter, it is helpful to remember that epiphanic passages usually occur as sudden alterations in the textual pattern, as Moritz Baßler (cf. 1996, p. 288) points out. This can be a shift in tone and vocabulary, or even in point of view. Epiphanies embody a moment in the essay in which the mode of description becomes most lyrical, pushing the boundaries of language itself.

In nature essays, epiphanies feature as descriptions of an intense, mind-expanding engagement with nature. Such passages are by no means limited to metaphysical epistemologies. The preceding analyses have demonstrated that epiphanies can also be embedded in and triggered by a materialist view of the natural world. Attempts to lay down firm qualities of nature, as in the aesthetics of collecting and connecting, of data representation, and measuring and mapping, are often counterbalanced by epiphanies and visions of the sublime. These textual moments superimpose literal with figurative meaning, making it possible to blend scientific and metaphysical perspectives. As will be evident by now, my division of the nature essay into separate epistemes is necessarily artificial – every classification of literature by category must be. Modes of knowing, presenting, and contemplating nature are interconnected, each drawing on and contributing to all the others. Still, some distinctions can be drawn. Instead of giving priority to the collectible, countable, and measurable, metaphysical elements in nature essays frequently transcend the material world in search of a figurative meaning.

In terms of content, epiphanies represent moments of unity and wholeness. According to psychologists, epiphanies provide an example of "psychic extension" (Beja, 1971, p. 7) in that they temporarily alter the human perception of an environment. Epiphanic nature descriptions can convey a sense of the emotional significance an environment takes on for the observer. Animals, landscapes, the horizon or the weather can suddenly become revelatory because they take on the radiance of something beyond themselves. The analysis of epiphanies can therefore contribute to a better understanding of the textual depiction of encounters between human and non-human agents and their environment.

The American ecocritic Dana Phillips in his critique of nature writing has, however, challenged the belief in the ecological value of epiphanies. He argues that instead of providing actual scientific knowledge and insight into the eco-system, epiphanies celebrate a metaphysical feeling, the worth of which remains dubious. Phillips considers epiphanies an inadequate tool to promote ethical responsibility, as long as they only serve as a means to demonstrate the intensity of nature-related spiritual emotions. He accuses well-known American nature writers such as Annie Dillard and Barry Lopez of failing to address more complex ecological and environmental issues because they are "too preoccupied with the self as the formative and essential element of experience [...]" (Phillips, 2003, p. 195). The epiphany, according to Phillips, becomes the paradigmatic rhetorical device of this self-absorbedness. Instead of engaging with empirical nature and actual environmental risks, a lot of modern nature writing seems to be more occupied with "writing about a response to nature" (ibid., p. 210). For nature essays in particular, the textual staging of a subject-based human perception is central, yet Phillips's criticism is unjust as far as the essays discussed by me are concerned. Nature is brought forth by language and filtered through the perception of the essayistic subject speaker, but through the three interacting levels of essayistic writing (introspection, description, reflection), most of the texts blend depictions of inner responses with extensive contemplation of ecological processes and the material world. In this respect epiphanies can be firmly embedded into the essay's structure, argument, and purpose.

Another point made by Phillips is that many epiphanies perpetuate a nature-culture dualism that "can be summed up by the propositions (1) that nature, which is refreshingly simple, is good; and (2) that culture, which is tiresomely convoluted, is bad; or (3) at least not so good as nature. And insofar as the ecocritic's epiphany in-

spires such thoughts, its implications are largely reactionary." (Ibid., p. 3) But is this accusation just? Do epiphanies inevitably have to tie in with dualist notions of nature? Material ecocriticism may add a further twist to this discussion. In a recent publication, Timothy Morton, unlike Phillips, stresses the ecological benefits of epiphanic aesthetics. He argues that in "an epiphany, agency is on the side of the thing, by which is meant the nonhuman side – the Angel appears to Mary; the Sun disappears in a sky." (Morton, 2014, p. 273) Although this might be slightly overstated as epiphanies, in the end, are rhetorical constructs brought into existence by the human author, Morton still stresses an important point. He underscores the fact that epiphanies, like depictions of sublime nature experiences, do not need to be a single-sided phenomenon. As opposed to anthropomorphic projections of feelings onto landscapes, epiphanies capture an intensity that is ignited partially by some quality originating in the natural world. Morton argues in line with Kant that the "experience of beauty cannot be broken down", because it is impossible to say "which part of the moment of beauty is 'in' the thing or 'in' me." (Ibid., p. 277)¹ According to Hartmut Böhme's ecological aesthetics, the sensual perception of colours, shapes, and size allows us to participate in the presence of things that give themselves to the human observer through these particular qualities.² Epiphanic descriptive passages in the nature essay, accordingly, can be useful as they verbalize the fact that the human subject is not the sole agent when it comes to encounters with the environment.

To discuss the role and function of epiphanies in nature essays this chapter focuses on two British authors. Peregrine falcons are the subject common to J.A. Baker's 1967 book *The Peregrine* and Kathleen Jamie's essay *Peregrines, Ospreys, Cranes* from her 2005 collection *Findings*. Falcon essays lend themselves to analysis in a chapter on epiphanies because the suddenness of recognition, which is characteristic of the epiphany, happens in analogy to the most outstanding feature of peregrine falcons. When hunting, peregrines sometimes dive-bomb their prey, killing it in a rapid 'stoop', as falconers call it. The great speed of this corresponds to the "powerfully felt, momentary experiences" (Nichols, 1987, p. xi) with which epiphanies are commonly associated. Starting with an analysis of the redemptive quality of epiphanies in J.A. Baker's writing, I will then move on to Kathleen Jamie's contemporary nature essay writing.

¹ Morton draws on the Kantian definition of beauty. According to Kant (cf. 1987) inexplicability is a necessary precondition of the beautiful – Morton files the epiphany under this category.

² For a good summary of Böhme's argument see Rigby, 2011, pp. 144-145.

J.A. Baker, *The Peregrine*

When *The Peregrine* was first published in 1967 it immediately won the distinguished Duff Cooper prize for nonfiction. Later, however, the book fell into oblivion and has only recently been re-discovered,³ long after the death of its author in 1987. J.A. Baker was a literary outsider. He spent most of his life in Essex, working as a manager for the Chelmsford branch of the Automobile Association, although apparently he could not even drive a car (cf. Cocker, 2011, p. 8). Apart from *The Peregrine*, he published only one other book, *The Hill of Summer* (1969), a compilation of journal entries. So far very little is known about Baker's life, but with the newly founded J.A. Baker archive at the University of Essex this might change over the next years. Bird-watching started as an activity Baker pursued in his spare time and continued to take up ever more space in his life. In 1963 he quit his job to dedicate all his time to birds and writing. Together with his wife, he lived in the small rural town of Chelmsford, Essex, where they depended on savings, a small pension and National Assistance to provide for their maintenance (see Macfarlane, 2015a, p. 151).

The Peregrine is the densely written and from all we know autobiographical account of a man's almost mystical obsession with peregrine falcons that prompts him to follow them for "ten years" (Baker, 2011, p. 31). Split into three parts, which differ in length and approach, the book consists of approximately a hundred and fifty pages. In the first, rather short, section *Beginnings*, Baker's narrator explains his interest in peregrines, stressing that he "always longed to be a part of the outward life, to be out there at the edge of things [...]" (ibid., p. 28), a condition falcons represent like other birds because they "know suffering and joy in simple states not possible for us." (Ibid.) The second, fifteen page long, section *Peregrines* is most clearly determined by modern scientific discourse, as it provides some basic ornithological facts about peregrines. It is followed by the core section, *The Hunting Life*, which consists of more than one hundred pages. Not unlike Thoreau, who condensed more than two years at

³ Echoes of *The Peregrine* can be found in many works of the so-called 'New Nature Writing' and beyond (see Farrier, 2015). Of the contemporary British nature writers Robert Macfarlane, in particular, helped to launch Baker's rediscovery. He composed an introduction to a new edition of *The Peregrine* for the New York Review Books Classics series in 2004, while Mark Cocker, himself author of avian writing (*Crow Country. A Meditation on Birds, Landscape and Nature*, 2007), contributed an introduction to the new 2011 HarperCollins edition which features the complete works of J.A. Baker. But the influence of Baker reaches further. The German filmmaker Werner Herzog includes *The Peregrine* in a mandatory reading list of his Rogue Film School and mentions it in interviews whenever asked which books influenced him. Following its immense recent success in the Anglophone world, the book has also been translated into several other languages. It features, for instance, in the German *Naturkunden* series (published by Matthes & Seitz 2015). This goes to show its central role in nature essay discourse.

Walden Pond into one seasonal cycle, Baker distils the continuing experience of ten bird-watching years into diary-style entries that extend over a period between 1st October and 4th April of the following year. This generates a manageable narrative time frame and evokes the experience of seasonal change.

As a whole *The Peregrine* is strictly speaking more than an essay. Macfarlane calls it a work of "generic disobedience" (2015a, p. 141) that combines elements of lyric poetry and elegy, patterns of the diary, the taxonomies, zoological facts, and numeric tables of natural science, and the species enumerations of field notes with the generalising contemplations of the essay. Its overarching grasp of falcons is highly reminiscent of nature essay writing's epistemologies. Echoing romanticist doubts about the concept of objective knowledge and in distancing himself from the methods of modern natural sciences, Baker argues in *Beginnings* that the "excitement of seeing a peregrine stoop cannot be defined by the use of statistics" (2011, p. 34). Instead he explains his use of a double perspective:

In my diary of a single winter I have tried to preserve a unity, binding together the bird, the watcher, and the place that holds them both. Everything I describe took place while I was watching it, but I do not believe that honest observation is enough. The emotions and behavior [sic] of the watcher are also facts, and they must be truthfully recorded. (Ibid., p. 31)

This subject-based take on knowledge is typical of the essay genre and can be traced back to the liminality promoted by naturalists around 1800. Humboldt, for instance, claimed in a central passage of his *Kosmos* that it does not suffice to describe the external appearance of nature. Like Baker, he insists that "die Natur muss auch dargestellt werden, wie sie sich im Inneren der Menschen abspiegelt" / "nature must also be depicted in how it is reflected within human beings" (2008, pp. 3-4. The English translation is my own).

Much of the textual space in the core section is filled with descriptions of Essex landscapes, hunting falcons and their prey. These depictions are delivered from the point of view of a locally circumscribed first-person narrator. We learn that he is constantly on the move while pursuing falcons, "clambering over gates, cycling along lanes" (Baker, 2011, p. 73). We also learn about the beauty this narrator seeks in nature, but otherwise we do not learn much about his everyday life. Baker resists incorporating the bird-watching theme into any greater line of story-telling – Helen Macdonald's bestselling 2014 memoir *H is for Hawk*, for instance, provides a counter-model where descriptions of goshawks and their training form part of a narrative of human mourning. He never even mentions his working or family life, as if both have

been wilfully erased. This happens much in line with the underlying dualist nature-culture concept to which I will return later. The absence of a greater plot creates an essayistic space for extensive descriptions and contemplations. The literary essay is the paradigmatic form in which such nature observations can unfold to full extent, while the observing human subject has room to roam and contemplate this experience.

By stripping away any references to a specific time frame or physical location (only Chelmsford is mentioned once), Baker's observations gain a primitive quality. In comparison with the aesthetics of measuring and mapping, discussed in Chapter 2.2, his approach is anti-encyclopaedic, driving forth a reversal of systematic geographical knowledge. In writing he emulates pre-named, unmapped territories. Although the places may not be identified by name, their features are specific, not geographically universal. Landscape descriptions in *The Peregrine* bear witness to a deep familiarity with these stretches of land.

Apart from seasonal change, the only major development that guides the reader through the text is a process of familiarisation that over time sets in between human watcher and the falcons. Shifts from first person singular pronoun into plural indicate this motion from diversity to unity in language. By March, the narrator records an encounter with the words: "We met by the brook." (Ibid., p. 157) This rhetorical treatment suggests an understanding according to which agents of different species meet consciously, though it seems unlikely that the falcons act on purpose. The narrator's imagined kinship with a raptor is based on wishful thinking. After watching the falcons for several months, he knows their favourite perching places, and understands recurrent patterns of hunting and physical aspects. Achieving familiarisation proves, however, to be a time-consuming process that involves slowness. Mark Cocker observes in his introduction that *The Peregrine* "is in many ways the antithesis of wildlife television, which is always cut to the chase. Baker is the master of emptiness and no action." (2011, p. 12)

The monotony of recurrent sequences of observed behaviour could be exhausting to read if they were not counter-balanced by Baker's refined prose style. In *Hunting Life*, a chapter of *Landmarks* (2015), the British nature writer Robert Macfarlane describes a trip to the J.A. Baker archive in Essex. Reading the original manuscript of *The Peregrine*, he discovers that Baker had in parts "re-lineated his prose as verse", had "tallied and totaled the number of verbs, adjectives, metaphors

and similes" on each page, and "had subjected his sentences to prosodic analysis, with stress and accent marks hovering above each syllable, as if scanning poetic metre" (2015a, p. 153). The lyrical quality of Baker's prose has been compared to the writing of Ted Hughes (see Fanshawe, 2011, p. 22), whose poem *Hawk Roosting* might have been an influence. The text abounds in metaphors, similes and unusual combinations of images: Baker's narrator sees "the frozen cider sky" (2011, p. 69), the tiercel's plumage "gleamed like mail in glittering spray" (ibid., p. 59), and snipes in a flooded meadow come to resemble "little brown monks fishing" (ibid., p. 96). Whereas epiphanic aesthetics are usually recognizable by an elevation in style, Baker's writing features a permanent density.⁴ His use of language is characterised by inversions of the functions of words. When starlings "sky up violently" and he looks at "a seethe of white",⁵ verbs are derived from nouns and vice versa. Through such usage that expands the dictionary, the essay generates its own code. Another feature often used is synaesthesia, the replacement of one kind of sensory experience by another. Sounds are described as if they could be seen and visual elements as if they could be heard (e.g. "a crackling blackness of jackdaws", Baker, 2011, p. 86), to the effect that nature is evoked as a dynamic sphere, engaging with all human organs of perception.

If we take into account David Lodge's characterisation of epiphanies as the type of "prose fiction [that] comes closest to the verbal intensity of lyric poetry" as it is "rich in figures of speech and sound" (1992, p. 148), Baker's celebration of peregrine falcons can be read as a form of extended epiphany. The epiphany is paradigmatic insofar as the greatest theme of the text is the ever intensifying human-animal encounter in which the gap between human watcher and falcon is constantly bridged in the imagination. The first entry in the *Hunting Life* section of 1st October, for instance, contains a self-declaration that reflects the human gravitation towards the falcon's existence:

Wherever he goes, this winter, I will follow him. I will share the fear, and the exaltation, and the boredom, of the hunting life. I will follow him till my predatory human shape no longer darkens in terror the shaken kaleidoscope of colour that stains the deep fovea of his brilliant eye. My pagan head shall sink into the winter land, and there be purified. (Baker, 2011, p. 48)

The semi-religious tone of this passage conveys a strong sense of the metaphysical longing that drives the text. By turning his attention wholly towards the falcon, the

⁴ Macfarlane remarks that Baker achieved an intense style "by a curious combination of surplus (the proliferation of verbs, adjective, metaphor and simile), deletion (the removal of articles, conjunctions, proper nouns) and compression (the decision to crush ten years of 'hawk-hunting' down to a single symbolic 'season', its year unspecified)." (2015a, p. 152)

⁵ Quoted according to Cocker, 2011, p. 12.

essayistic subject speaker seeks solace and purification. More than an object of ornithological contemplation, the falcon is an agent in the text upon which the narrator's own unrealised and unfulfilled yearnings are projected. It seems unlikely that Baker's narrator knows that his own exaltation is the same as the bird's. If it isn't, then he is still attending to himself, not the falcon. The falcon is a powerful symbol of a quest for salvation. Baker's will to become more and more immersed into the bird's world has led Helen Macdonald to call *The Peregrine* an "ecological Confessions of St Augustine or modern-day Grail-search" (2006, p. 8). The species' name, *Falco peregrinus*, already contains the idea of a peregrination, a long journey, maybe even a healing pilgrimage. Falcon depictions are framed in the context of a spiritual longing for what Baker imagines as the bird's less estranged and more elevated existence that the text evokes through epiphanic descriptions. Two types of epiphanies can be distinguished. The first are descriptions of actual epiphanic experiences in which the sight of the bird elevates the narrator, as in passages like this:

By half past three I had given up searching for the peregrine and was sitting glumly on a gate near the dead oak. When he suddenly flew past me, I was lifted to joy on the surge of his wings. There was a zestful buoyancy, a lilting eagerness in his rushing-past, boring, dipping, swaying, curving-up flight. He perched in a tree to the east and looked back at me. I felt that I had been found. (Baker, 2011, pp. 130-131)

She slipped smoothly through the wind, as though she were moving forward on a wire. This mastery of the roaring wind, this majesty and noble power of flight, made me shout aloud and dance up and down with excitement. Now, I thought, I have seen the best of the peregrine; there will be no need to pursue it farther; I shall never want to search for it again. (Ibid., p. 135)

In both excerpts the epiphanic experience is mediated through the voice of the essayistic narrator. This creates a certain distance between the moment itself and its conversion into language. Joy is expressed most explicitly as the narrator comments on his feelings, describing the epiphany in terms of a shift from low to high spirits that ties in with the bird's "buoyancy". But when the bird is gone, epiphanic elevation ceases. Stylistic alternations indicate the beginning of a post-epiphanic moment of disenchantment. The second epiphany is followed by an enumeration as the narrator comments: "I was left with nothing but the wind blowing, the sun hidden, my neck and wrists cold and stiff, my eyes raw, and the glory gone." (Ibid., p. 136) Epiphanies are staged as eruptive moments of wholeness. They are represented as being triggered by the birds themselves, which makes them rewarding to discuss in terms of animal agency. Each of them depicts the peregrine as an active force, equipped with the power to provoke strong feelings in the watcher. The use of the passive in the last

sentence of the first excerpt, for instance, fits into Timothy Morton's scheme of epiphanic aesthetics according to which it remains unclear who provokes an epiphany. Agency does not lie merely in the eye of the human subject, but is depicted as residing at least partially in the bird itself, unsettling the subject-object relation between watcher and watched.

The second type of epiphany lacks the explicit human contemplation of the experience. The essayistic subject is present in the saturation of the text with metaphor rather than as an analytical voice. His sensibility makes itself felt in the lyrical language of the following two short passages (the first depicts a kingfisher, the second a tiercel falcon) that are characteristic of this second category:

In the green sunlight dappled on the water it gleamed like a luminous-sharded rain beetle. It had a glow-worm radiance, as though it were under water and sheathed in a bubble of silver air. It clouded the sun's reflection with a streaming haze of emerald blue. (Ibid., p. 118)

Crisp and golden in the sunlight, he swam up through the warm air with muscular undulations of his wings, like the waving flicker of a fish's fins. He drifted on the surface, a tiny silver flake on the blue burnish of the sky. (Ibid., p. 93)

Both excerpts play with water, air, and light imagery, evoking the bird in terms of another species (fish and beetle) – a sort of secondary synaesthesia. The narrator depicts the epiphanic radiance of these avian creatures as a visual spectacle. Baker's style abounds in descriptions of metallic glow and shine as he charges the surrounding landscape and animals with beauty and transcendental meaning. The second extract describes the moment when a raptor circles the sky. Drawing on a maritime isotopy, Baker's narrator charges its motions with a radiant beauty and grace as he transfers the flight from air to water. This rhetorical treatment brings about a displacement which is meant to illustrate the powerfully smooth physicality of the bird's movements. The text treats air like water, making "what is immaterial and without physical form somehow concrete and solid" (Cocker, 2011, p. 14) and more accessible at that. Water functions as an element in which the reader is more likely to have experienced the lightness of the human body than air. The water imagery, accordingly, serves a communicative function, as is typical of the essay genre. It conveys a sense of what gliding through warm air might feel like for a falcon. Humans, in contrast, are cut off from similar experiences of lightness. While watching seals Baker's narrator mourns: "We have no element. Nothing sustains us when we fall" (2011, p. 153). The tiercel's airborne splendour takes on the significance of a desirable way of being. His peculiar appearance is evoked through noble metal colour adjectives. Interestingly, a similar

rhetoical treatment is given to the kingfisher in the first quotation. Baker compares them to gleaming beetles. In its focus on light and colour these highly visual descriptions are reminiscent of a passage in *Walden* where Thoreau mentions "a rare mess of golden and silver and bright cupreous fishes, which looked like a string of jewels" (2008, p. 282), and they bring to mind Jünger's epiphanic jewel beetle depictions in *Subtile Jagden* as discussed in Chapter 2. Although Baker does not deal with insects, he sometimes makes use of description techniques similar to Jünger's. Let me briefly return to Jünger, to highlight some of these aesthetic parallels.

When depicting hibernating insects in Goslar Jünger describes the aspect of the timid movements of an insect's antennae in terms of a sparking warm light (cf. 1980, p. 162). Jünger's take on insects, generally, is inspired by a scientific epistemology in that he frequently describes them from the materialist point of view of a collector, focussing on physicality and surfaces. But he sometimes transcends their materiality in search of metaphysical meaning. The surprise of discovery in this short passage is represented through the rhetorical device of epiphany: the jewel beetles take on a transcendental significance that is evoked through an imagery of inflamed light. In his depiction, Jünger charges the hibernating jewel beetles with personal meaning, as he celebrates the elevation of his own spirits while watching them through his prose style. Baker's quest for falcons is not so much inspired by the idea of natural history collections and the differences and similarities of their classification schemes. He rather pursues their beauty and independence, but his use of language is similar to Jünger's. In *Beginnings* he explains:

When the hawk is found, the hunter can look lovingly back at all the tedium and misery of searching and waiting that went before. All is transfigured, as though the broken columns of a ruined temple had suddenly resumed their ancient splendour. (Baker, 2011, p. 31)

It is striking that Baker shares with Jünger the leitmotif of the hunt, although he does not kill the animals he pursues. Bird-watching in *The Peregrine* is hunting for epiphanic moments of transcendental significance and beauty. It is in language that Baker lets those epiphanies happen. The text repeatedly evokes the spiritual elevation the human watcher experiences when a falcon suddenly rises. Baker does so in a way similar to Jünger's, in a prose style that focuses on visual aspects, especially colours, turning the falcon into a precious stone that "shone and twinkled in the sun, or cut across white clouds like a black diamond." (Ibid., p. 161) Noble colour adjectives and descriptions of bright, gleaming light represent the peculiar aura of the bird.

At the time when Baker wrote *The Peregrine*, falcons had almost been driven to extinction in England, due to the use of toxic agrochemicals in the agricultural industry.⁶ He felt himself to be living through an era of decline in bird populations. The threat of a vanishing species, therefore, is present throughout the whole book. It is captured in shocking images that are opposed to the beauty of epiphanic vision. *The Peregrine* features several descriptions of polluted nature and suffering animals, like the "red-throated diver, sodden and obscene with oil", or a "poisoned crow, gaping and helplessly floundering in the grass, bright yellow foam bubbling from its throat" (Baker, 2011, p. 113). Peregrines, in particular, suffer from man-made pollution. They "die on their backs, clutching insanely at the sky in their last convulsions, withered and burnt away by the filthy, insidious pollen of farm chemicals" (ibid., pp. 31-32), and Baker concludes in *Beginnings*: it "is a dying world, like Mars, but glowing still." (Ibid., p. 32) Resonating with doomsday imagery, this comparison relates the danger of the extinction of this particular species to the vanishing of all life. It echoes the environmental alert of Rachel Carson's *Silent Spring*, which was first published only five years earlier in 1962.⁷ The trope of "environmental Apocalypticism" (see Garrard, 2012, Chapter 5) provides a sense of preservationist urgency. "Before it is too late, I have tried to recapture the extraordinary beauty of this bird" (2011, pp. 31-32), writes Baker. The idea of textually preserving a threatened species is not uncommon among nature essayists, as we have seen earlier. It often goes hand in hand with an aesthetics of collecting for which enumerations, a focus on shape and size, and visual descriptions are characteristic, as outlined in Chapter 2.1. Epiphanies, in this context, have the ability to preserve the beautiful aspect of the bird in writing.

Apart from this, the motif of environmental destruction, introduced early in the text, also serves as a means of reinforcing and explaining the feelings of alienation that Baker's narrator experiences in the face of his own species. Appalled by the behaviour of fellow human beings he turns fully toward the world of the falcons where he experiences grace. The peregrine's avian elevation provides a counter-image to the despised human existence: "Free! You cannot know what freedom means till you have seen a peregrine loosed into the warm spring sky to roam at will through all the far

⁶ W. H. Hudson notes as early as 1913 that the "peregrine, the most perfect of the falcons – perhaps, as some naturalists think, the most perfect of the entire feathered race – maintains a precarious existence on the boldest sea-cliffs, and as to the hobby, it is now nearly extinct." (2012, p. 213).

⁷ Terry Gifford (cf. 2017), however, only recently stressed, in a paper given at ASLE-UKI conference 2015, that Carson's immediate influence on British ecological discourse in nature writing is negligible. There is indeed no direct reference to *Silent Spring* in Baker's writing.

provinces of light." (Ibid., p. 159) The peregrine seems to be perfectly in balance with its environment. The exclamation mark stresses the emotive function of language as it represents the inner response of the essayistic subject on the level of introspection. At the same time, Baker depicts the peregrine as being "loosed into" the sky. Metaphorically dissolved into a lighter state, the raptor is depicted as embodying a more wholesome and well-balanced form of existence. Baker usually presents the birds' unity with their environment either in terms of a strong colour and light imagery, as outlined above, or he presents their harmonious movements as a pre-ordained system, in which birds are "moving on hidden wires, or following some familiar pathway through the air." (Ibid., p. 83) Humans, in contrast, "walk within a hoop of red-hot iron, a hundred yards across, that sears away all life." (Ibid., p. 165) Standing at the top of the food chain, humans are feared by other animals. When looking at an owl in a tree the narrator reflects, "I was outside and he was inside, and he had nothing to say to me." (Ibid., p. 155)

Although the narrator in the face of the majestic falcons repeatedly reflects on his feelings of physical inferiority as he presents himself as "a crippled hawk, perhaps, unable to fly or to kill cleanly, uncertain and sour of temper" (ibid., p. 146), epiphanies manifest at least a temporary redemption in that they celebrate the possibility of sharing the birds' elevation through the visual senses. Thomas L. Lyon even associates descriptions of spiritual exaltation with the Garden of Eden:

But there is an edge of meaning to any awed description of nature; what is being called forth is, in effect, the world before the Fall, before any sense of alienation. The sight of birds in abundance, in particular, seems reliably to have evoked the former earth in its wholeness, and the paradisaical, human capacity for wonder. (1989, p. 2)

The text's intense depiction of falcons peaks in visions of becoming one with them, losing oneself completely in the bird's life. Philip Armstrong, in his study of animals in modern literature, associates this striving for a purer, more intense experience of the world with a so-called 'therio-primitivism'. Referring to Sigmund Freud (see Armstrong, 2008, pp. 142-143), he explains that animals can represent an original or a primitive state repressed in culture. Armstrong points out that wild animals "remind us that as organic beings we, as they do, experience history in our bodies and carry the past in our flesh." (Ibid., p. 169) Through their animal depictions, writers may express a longing for the impulse of re-connection with their animalistic unconscious. Baker's falcon pursuits, accordingly, can be understood as "re-enactments of primal rituals, regenerative links to the anthropological and ontological

foundations of human being." (Ibid., p. 150) *The Peregrine* establishes inter-species bonds through intense descriptions and a highly unusual prose style. The quasi-Shamanistic union between falcon and narrator is, of course, only imagined and repeatedly staged in writing. It functions as a substitute for human community, as compensation for social bonds otherwise lacking, and is most vividly evoked in close encounters such as this:

By two o'clock I had been to all the peregrine's usual perching places, but had not found him. Standing in the fields near the north orchard, I shut my eyes and tried to crystallise my will into the light-drenched prism of the hawk's mind. Warm and firm-footed in long grass smelling of the sun, I sank into the skin and blood and bones of the hawk. The ground became a branch to my feet, the sun on my eyelids was heavy and warm. Like the hawk, I heard and hated the sound of man, that faceless horror of the stony places. I stifled in the same filthy sack of fear. I shared the same hunter's longing for the wild home none can know, alone with the sight and smell of the quarry, under the indifferent sky. I felt the pull of the north, the mystery and fascination of the migrating gulls. I shared the same strange yearning to be gone. I sank down and slept into the feather-light sleep of the hawk. Then I woke him with my waking. He flew eagerly up from the orchard and circled above me [...]. He was like a wild hawk fluttering miserably above the cage of a tame one. (Baker, 2011, p. 132)

Baker's narrator imagines himself as a tamed animal in a cage, whereas the free falcon represents a unity he cannot achieve, but for which he yearns. His yearning is both paid for and provoked by stepping away from humankind. This dynamic is highly reminiscent of what Gilles Deleuze writes in an essay on Rousseau's vision of a state of nature, "a state in which humanity has a relationship with things, not with one another", characterised not only by "independence, but [also] a state of isolation." (2004, p. 52)⁸ It is exactly this solitariness which determines Baker's writing as he gives up on social bonds. The decision to omit the social context of bird-watching, therefore, can be seen as a motion towards purity. Arguing that to be lost in the Essex landscape, "however briefly, was a true release from the shackles of the known roads and the blinding walls of towns" (Baker, 2011, p. 133), or pointing out that he "avoid[s] humans" (ibid., p. 117) and, like the peregrine above him, "heard and hated the sound of man, that faceless horror of the stony places" (ibid., p. 132), the narrator indulges in anti-cultural contemplations. Are epiphanies in *The Peregrine*, accordingly the reactionary tool Dana Phillips accuses them of being?

For Baker's narrator the falcons do indeed represent a positive counter-image to evil human culture, but the text as a whole does not exclusively rely on this black and

⁸ David Farrier also points out the usefulness of Deleuze and Guattari's concept of 'becoming animal' for *The Peregrine*, while acknowledging its limits in the face of a poisoned landscape in which birds are threatened by extinction (cf. 2015, p. 747).

white nature-culture dualism. This is first and foremost owing to changes in perspective. Although *The Peregrine*, to a great extent, utilizes dichotomies, it also reflects on the various ways in which nature and culture are blended and have become inseparable. This theme arises, in particular, when the bird's perception of the world is concerned. At one point the narrator notices that the falcons recognize his presence and "may associate me now with the incessant disturbance of prey, as though I too were a species of hawk." (Ibid., p. 116) Although peregrine and tiercel are in ornithological terms not hawks, but falcons, Baker makes an interesting point here. Picturing to himself the patterns of perception of the animal, he argues implicitly that falcons lack the theoretical framework to distinguish between humans and animals. This change of perspective allows us to see that a falcon's animated *Umwelt*⁹ is defined only in terms of prey or predator, or as Baker states, for "a bird, there are only two sorts of bird: their own sort, and those that are dangerous. No others exist. The rest are just harmless objects [...]." (Ibid., p. 53) Whereas humans are punished with division, since reason enables them to draw distinctions between themselves and nature, animals remain outside this framework. Their world, to the narrator, looks as if it were still whole and is therefore equipped with the power of salvation. To the raptor, other than to humans, man-made artefacts cannot be distinguished from 'natural' elements in landscapes. The narrator ponders: "these gritty country lanes must look like shingle beaches; the polished roads must gleam like seams of granite in a moorland waste. All the monstrous artefacts of man are natural, untainted things to them." (Ibid., p. 98) A change of perspective allows the narrator to expand the possibility of finding beauty in his environment to man-made infrastructure. It is striking that in this passage the verb 'to gleam', which is usually reserved for the epiphanic descriptions of birds up in the sky, is applied to human culture.

The text also goes beyond the nature-culture divide when it depicts the interaction between falcons and civilization. Baker's narrator describes, for instance, how the falcons follow tractors in the fields because they have learned that in the realm of the machines "birds are constantly on the move" (ibid.), using them thus as a partner in hunting. And at another point, he depicts how the birds of prey, knowing that over

⁹ The notion of 'Umwelt' (Engl., environment or lifeworld) goes back to the Baltic German biologist Jakob von Uexküll. It denotes the lifeworld of a being. According to Uexküll different species are equipped with different sense organs that shape their perception of the world. Each being is guided by significant elements in its environment. While some of these may overlap and interweave with elements that matter to other beings, the *Umwelten* also differ from each other. This means that different lifeworlds exist simultaneously because not all species experience the same elements as significant and, therefore, live in separate realities (see Uexküll, 1934; 2010).

"the roofs of farm buildings warm air was rising faster" (ibid., p. 104), use man-made thermal streams to circle into greater heights. In those passages culture is intermingled with nature in a non-violent way. Instead of portraying the clash that leads to species extinction, Baker also raises awareness of such positive moments of interspecies cooperation. These passages lack, however, the elevated prose of epiphanic aesthetics. In order to celebrate the birds' transcendental significance rhetorically, it might indeed be necessary to draw on a nature-culture gap, whether it exists or not.

Kathleen Jamie, *Peregrines, Ospreys, Cranes*

J.A. Baker warned against the imminent extinction peregrines were facing in the late 1960s. Fifty years on peregrine falcons are once again nesting in many parts of Europe and continue to inspire contemporary nature writing. In *Peregrines, Ospreys, Cranes*, the Scottish poet and essayist Kathleen Jamie describes in slightly less than twenty pages a time in early spring when a pair of peregrines settles down to nest on a cliff near her Scottish hometown. The birds are not usual breeders in this region and attract much attention in the small community of 2,500 inhabitants. The essay featured as the second chapter in Jamie's 2005 collection *Findings*, which put her on the map as one of the major voices of the so-called 'New Nature Writing' (see Cowley, 2008). In my short analysis, I will focus mainly on this single essay because it directly responds to *The Peregrine*, complementing and counteracting Baker (cf. Farrier, 2015, pp. 752-756).

Told from the point of view of an autobiographical first-person narrator, *Peregrines, Ospreys, Cranes* begins in medias res: "She has been calling for this week and last" (Jamie, 2005, p. 29). Sound, not vision, is the sensory impression that announces the arrival of the peregrines. We encounter Jamie's narrator sitting at her desk, as she becomes aware of the bird's piercing screeches. "The sound enters my attic room through its window" (ibid.), she comments: it even "drills into your head" (ibid.). The falcon's mating noise trespasses through the building's walls, revealing the porous interface between what we call 'nature' and 'culture'. Agency, in this description, is deliberately delocalised from the human subject towards the raptor that is equipped with a penetrating radiance. It is not a human being who seeks the falcon, but the bird whose presence draws the attention. The paradox lies in the fact that "though half the town can hear it, the male peregrine must know this sound is intended for him alone."

(Ibid., p. 30) In focussing on the sensory perception of hearing, Jamie reveals the elusiveness of the birds which occupy a place "at the edge of one's senses" (ibid., p. 47). This distinguishes her approach from Baker's. Whereas his essayistic subject speaker is mostly located within the falcons' *Umwelt*, experiencing epiphanic moments in fields and forests, Jamie gives more weight to her narrator's environment as the opening scene already indicates. Even without leaving the house – the centre of her lifeworld – it is possible to experience some form of contact with wild animals.

Jamie's essayistic subject is a circumscribed place-based narrator who is entangled both in the daily routines of family life and embedded in a small-town community environment. Narrative shifts from first person singular to plural ("[e]veryone's saying this weather can't last. 'We'll pay for it!' we agree, in our gleeful Calvinism", 2005, p. 32) exhibit this local community. Such shifts also occur in *The Peregrine*. In Jamie's writing, however, they do not reflect moments of imagined oneness with the falcons, but represent the collective voice of the small-town population. This is a narrative perspective frequently used in the literary genre of the village story, but it is also indicative of the ways in which essayistic narrators frequently speak in place of a larger community. Where Baker exposes isolation from society, Jamie displays oneness, yet without omitting Man-made environmental damage. Her narrator points out, for instance, that ospreys were "hunted to extinction in the nineteenth century" (ibid., p. 46), before being re-introduced in the mid-twentieth century; and some peregrines' nests must be "guarded around the clock for fear of egg-snatchers or unscrupulous falconers who'd take the young." (Ibid., p. 31)

Falcons appear alongside other animals, as the essay's title already indicates, and, what is even more notable, they sometimes drift into the domestic environment of the narrator who is mostly occupied with taking care of her two small children. The bird-watching theme is, accordingly, framed socially. This becomes particularly apparent when we look at the text's topography. The focus of the narration remains within the borders of a determined local area,¹⁰ which is defined by places related to the upbringing of her children and distances she can cycle during a free morning on her own. This goes to show the smallness of this mother's world. In a different type of text this could be the key element of a narrative of domestic discontent. And although the narrator sometimes expresses a longing for release from the routines of

¹⁰ Deborah Lilley (see 2013, p. 20) notes the connection between the essay form and sudden shifts in focalization and location. Laura Severin, in her feminist reading of *Findings*, likewise stresses the importance of place in *Peregrines*, *Ospreys*, *Cranes* (cf. 2011, pp. 101-102).

daily life (e.g. when she reflects on the liminality of jackdaws: "Chimneys are the jackdaws' haunt, and I envy their elevated life, at once part of a household and part of the wide air." Ibid., p. 34), the essay refuses to go further down this road, adopting a comic mode instead. In a scene of early morning bird-watching Jamie turns an intense engagement with falcons into a domestic comedy in miniature form:

I refocused, and there were the peregrines sitting a yard apart up on the cliff. He was still as a stone, like a votive statue on a high plinth. She was restless, stretching and preening. She lifted her wing and stretched it slantwise across her back, a balletic movement. Then she scratched her ear with her yellow claw. Then she preened her breast. It was about 8.30 on a Saturday morning. The children came into my room demanding breakfast, but I was leaning out of the window in my nightclothes staring through binoculars. (Ibid., p. 39)

By framing the scene self-deprecatingly in a family context, Jamie both evokes and breaks with the earnestness of the yearning for epiphanic transcendence. Although her narrator is "leaning out of the window" as she is literally drawn towards the elegance and beauty of the falcons – expressed by an imagery of ancient and classical art – her children pose a counter weight to the idle wanderer. As a consequence of her responsibilities as a mother, watching peregrine falcons becomes a "warm secret" (ibid., p. 46) she pursues in her day-to-day life; or, to put it with Sarah Crown, in Jamie's writing "nature resides in the cracks and crevices of daily life" (2012). This form of tacit wildlife observation represents both an alternative to the retreat from society practised by Baker and a refusal to become entirely absorbed.

Intrigued by the peregrine's rareness in her part of Scotland, she orders ornithological books online to learn more about these animals. One of the books that arrives by mail is J.A. Baker's *The Peregrine*. The reference to Baker provides first of all some basic zoological facts about peregrines. "I settled to read and at once learned that the peregrine's eyes are bigger and heavier than our own" (Jamie, 2005, pp. 35-36), she comments. This is actually a common way of including knowledge in contemporary nature writing: the topos of the protagonist who sets off to the local library or searches the internet for information, as it conveys information credibly rather than implying a kind of omniscience on the subject. It complements the actual act of watching and enhances and redirects the speaker's discoveries into a body of established knowledge. But in addition, Baker's account features most notably as an example of a self-immersed masculine type of nature writing that is criticised for acting, socially speaking, in a vacuum:

J.A. Baker says, if you can't see the falcon, look up, and though I scan the sky I see nothing but grey clouds, and I wonder instead about J.A. Baker. Who was this man who could spend ten years following peregrines? Had he no job? Per-

haps he was landed gentry. What allowed him to crawl the fields and ditches all day, all winter, until he could tell just by a tension in the air that there was a peregrine in the sky? His book is full, tremulous, overwrought, hungry. He writes like a falcon must see and so allows us to see, too. (Ibid., p. 43)

Jamie's essayistic narrator both marvels at Baker's writing and uses it to distinguish herself from what she earlier calls a "tradition in literature of lone men engaging with birds" (ibid., p. 38).¹¹ Why does he have all this time, she asks, whereas she has to work, take care of her children, and carry the burden of her commitment to household duties, all at the same time. Her contemplation stresses the different types of framing. As opposed to nature essays which feature a "lone enraptured male"¹² as narrator, Jamie adopts a more moderate approach. We learn about her picking up her binoculars during short breaks from attending to her children: "Between the laundry and the fetching kids from school, that's how birds enter my life." (Ibid., p. 39) Whereas Baker's narrator seeks a counter-world in wildlife, Jamie rather emphasizes "analogues and points of connection between the domestic affairs of humans and other animals" (2014, p. 4), as Rachel Falconer argues. In doing so Jamie "sets her prose against a tradition of nature writing about solitary, extreme experience of the wild." (Ibid.) While Baker successfully erased most traces of a social context from his nature depictions, in Jamie's writing they move into the foreground.

At several points throughout the text, Jamie's narrator takes a decisively female, even a feminist perspective, transforming her observation into a meditation on the social contingency of bird watching and nature writing. This focus is already implicated in the essay's previously mentioned opening scene. By comparing the screaming of the female peregrine (the bird is explicitly referred to as "her") to the otherwise well-known noise of the neighbourhood's male "cockerel" (2005, p. 29), Jamie establishes a binary scheme to which the text repeatedly returns. One could even argue that the male-female dichotomy to a degree replaces Baker's nature-culture divide. Instead of framing the falcons in terms of the redemptive qualities of the wild, Jamie reveals common themes and motifs that for her constitute typically masculine writing, and unsettles them. This happens, for instance, in a passage where her narrator describes the falcon's hunting habits, a common topic of falcon literature:

Peregrine falcons kill their prey by diving down on it from above. They have other methods, but this dive, called a stoop, is the most spectacular. They can gain a lot of height, fold their wings and fall through the air at anything up to

¹¹ T. H. White's *The Goshawk*, Paul Gallico's *Snow Goose* and a film poster of Ken Loach's *Kes* are mentioned as examples of this male tradition.

¹² Jamie (cf. 2008) herself once mocked this type of narrator in a review of Robert Macfarlane's *The Wild Places*.

150 miles an hour, with a howling sound. The victim, snatched in flight by this terror from above, probably knows nothing. It is knocked cold by the impact, and then killed by a bite through the neck from the hawk's hooked beak. Though I scan the sky, I have never seen the peregrines hunt. (Ibid., pp. 36-37)

The hunt is neither described as an aesthetic feast nor as an epiphanic moment, as the narrator stresses that she has never seen it with her own eyes. It is rather portrayed in terms of its violence, captured in words like 'howling', 'terror', 'knocked cold', and 'bite'. Airborne violence is a theme the essay also addresses in a short account of the passage of a "formation of fighter jets" (ibid., p. 36) that features immediately prior to this one. The scene is otherwise not associated with the major theme of the essay. Listening to the radio, Jamie's narrator learns that the passing planes mark the return of the RAF from Iraq to Scotland. When the warplanes are mentioned, this not only sets a historical marker, but also evokes – yet does not adopt – the tradition of depicting falcons through an imagery of war bombing.¹³ By juxtaposing these depictions both with the hunting of peregrines and, in a second step, with the response of her children – "Later, my son asked if we were to be bombed. 'No', I said. 'We will not be bombed'" (ibid.) – Jamie unsettles the image of the dangerous avian fighter through a rather playful irony. The juxtaposition effects a clash between the falcon's "terror from above", (ibid., p. 37) the deadliness of human warfare, and the earthy conversation with children. It is the naïve infant-question that puts the war imagery into perspective, instead of celebrating it.

Moments of bird-watching happen between such social encounters, sometimes even in the middle of town. Jamie's narrator claims, for instance that the "best view of the nest side can be had from a garage" (ibid., p. 34). While spending time near the garage, awaiting the falcons, she meets one of the mechanics. The social embeddedness of bird-watching in this passage manifests itself through the use of dialogue. It turns out that the mechanic is equally spell-bound by the raptors, keeping a telescope hidden in an oil-drum. His colloquial comment, "[b]oy, she was making a racket this morning" (ibid.), reads like a counter-model to Baker's elevated prose as Jamie draws on the linguistic repertory of social realism. By including passages of orality *Peregrines*, *Ospreys*, *Cranes* displays the normality of embedded bird-watching. Deborah Lilley points out that by including other voices Jamie counter-balances the point of view of her first-person narrator and creates a "composite picture of relations around a place or object, rather than a representation as such." (2013, p. 20) The cas-

¹³ Helen Macdonald's memoir, to name another recent example, features a similar episode (see 2014, pp. 190-191).

ualness of this mode of observation is opposed to the notion of bird-watching as a wildlife event. While Jamie's criticism is most explicitly directed against the previously discussed type of male nature writing, she also turns against wild life tourism. A passage on osprey nest observation from the last third of the text makes this explicit:

Some sites are famous; they are public spectacles with viewing places and video link-ups. There are large road signs directing us to bird's nests, and we don't find this bizarre. I like knowing these things. I like being able to glance up from my own everyday business, to see the osprey or the peregrine going about hers. (Jamie, 2005, p. 46)

This excerpt opposes the way our contemporary consumer culture celebrates bird-watching as an event. Instead, Jamie argues in favour of incorporating birds into our "everyday business", rather than fostering "public spectacles".

I have already pointed out that the epiphany is an aesthetic tool which allows writers to represent moments of elevated transcendence and experiences of unity with the natural world. The fact that Jamie, from the beginning, makes peregrines a part of her own daily life raises the question of her use of epiphanies. When reading *The Peregrine* alongside *Findings* the greatest difference is probably the more grounded, unagitated voice, apparent in Jamie's use of language that deviates from Baker's purified falcon vision. In Baker's writing epiphanies represent the deep involvement of his narrator with the birds' counter-world as he imagines it. His search for peregrines is anti-social in that he erases most traces of other human beings from the text. For Jamie, by contrast, bird-watching represents a quiet form of resistance that can take place within society, and even within a working environment, as her encounter with the mechanic demonstrates. By freeing up micro-spaces within her daily routine, she carves out an embedded space for bird-watching. In an interview, Jamie explicitly stressed the political function of this casual form of nature observation: "when we do that – step outdoors, and look up – we're not little cogs in the capitalist machine. It's the simplest act of resistance and renewal." (Crown, 2012) Instead of quitting her job and leaving husband and children, Jamie proposes a quieter, private rebellion, albeit one that is working perpetually. Despite the fact that she avoids implementing a greater pattern of redemption, Rachel Falconer stresses that Jamie's "daily 'findings' amidst the routines of her ordinary life also lead her to a muted but no less powerful sense of revelation" (2014, p. 5). Epiphanies, as a consequence, are embedded in the domestic course of events, as the following scene from the end of the text exemplifies. During "an hour at lunchtime" (2005, p. 41) Jamie's narrator cycles to a local

osprey nest where she suddenly spots a huge bird, possibly a crane, as an RSPB ornithologist later suggests:

It flew hugely and slowly, and looked as if it would pass directly overhead. I knelt down to make myself small [...]. Like some medieval peasant granted a vision, I was kneeling in the field, fixated by this uncanny cross in the sky. (Ibid.)

Potent with Christian imagery, this scene is explicitly depicted in terms of an epiphany – yet one that occurs in a lunch break. The depiction of a “cross in the sky” ties in with a greater isotopy of resurrection that runs through the whole text. The falcon’s cries, for instance, are associated with “a lost lamb” (ibid., p. 30), traditionally a symbol for Jesus Christ; and the time period on which the essay focuses consists of the weeks around “Easter Sunday” (ibid. p. 37), the day when Christians celebrate Jesus’ resurrection. This imagery hints at nature’s redemptive, maybe even its curing, potential. To a degree, bird-watching in *Peregrines*, *Ospreys*, *Cranes* is driven by a quest for salvation, but one that is embedded in the domestic arrangements of family life.

Sometimes, this embeddedness can result in clashes of style, as a quotidian semantics, grounded in references to pop culture and the profane, undermines the transcendental elevation of epiphanic aesthetics, otherwise often associated with birds of prey. Concerning ospreys, Jamie’s narrator comments that there is “a fishing loch over there stocked with trout, a fast-food takeaway” (ibid., p. 46); she compares a tiercel’s motion of inspecting his feet to someone “who has a chewing gum on his shoe” (ibid., p. 32); states with an ironic nod towards the falcon’s rapid stoop that the bird checks the sky “more often than a Formula One driver changes gear” (ibid.); and points out that the “female falcon was hunched under an overhang, with her back turned like a cartoon dunce in a classroom corner, but no dunce she.” (Ibid., p. 37) One cannot fail to notice how through a seemingly fleeting observation of the animal, gender roles and stereotypes are implicitly recast. The dunce’s hood suggested by the space surrounding the female bird is nothing but a projection of the human mind. The undomesticated peregrine is free of the leather-hood used in traditional falconry that looms over her. Similes and metaphors generate an accessible, if anthropomorphic, imagery that connects to the experience of contemporary readers and ties in with the recurrent family theme. The comparison between peregrine and dunce connects this description to another scene in which her children enquire if they can watch “the cartoons on telly” (ibid., p. 40) during breakfast. This goes to show that the imagery related to the upbringing of children continually infuses the falcon descriptions in this essay, often to comic effect. These tropes re-inforce the humorous

side of nature, rather than staging the mystery and spiritual illumination that epiphanies sometimes evoke.

At points when Jamie's narrator, in the presence of peregrines, conveys a sense of wonder, she interestingly does so by interlacing her own thoughts with fragments from *The Peregrine*: "J.A Baker writes, 'The peregrine lives in a pouring-away world of no attachment, a world of wakes and tilting, of sinking planes of land and water.' I could envy that, sometimes." (Ibid., p. 36) This nested structure results in a loss of immediacy. While epiphanies can re-create the intensity of a transcendental nature experience, this mediated assertion comes across in a considerably less agitated manner. It is striking that in another passage that could be considered epiphanic – the "peregrine flickers at the edge of one's senses, at the edge of the sky, at the edge of existence itself" (ibid., p. 47) – she also adopts Baker's language: the word 'to flicker' occurs more than once in *The Peregrine*.¹⁴ Pairing metaphysical imagery with topology in her use of language, Jamie emphasizes the marginality of epiphanic wonder. By not letting epiphanies take centre stage, she protects them from exposure. Instead of a great epiphanic spectacle, it is the quiet intermediate epiphany that characterizes Jamie's feminist attempt to blend nature observation into the patterns of her daily life.

In J.A. Baker and Kathleen Jamie this chapter has discussed two practitioners of highly different essayistic modes of depicting human encounters with peregrine falcons. While Baker exhibits his narrator's quest for a mystical union with the raptors for which epiphanic aesthetics prove to be crucial, Jamie relies on a playful humour that mostly does without the transcendental exaltation of the epiphany. These different approaches could be traced back to two distinct understandings of nature. Staging his narrator as being both disgusted by human culture, for provoking so much misery among falcons, and expelled from his natural environment, due to his role as the most powerful raptor, Baker presents us with a world of divisions and a strong yearning to achieve unity. Jamie's narrator, on the other hand, is anchored in a social context that features many points of contact with wild animals. Epiphanies in her writing are not so much used to bridge a gap between separate spheres of life, because Jamie manages more successfully than Baker to describe nature as part of her daily experience, instead of gaining nature only by abandoning culture. For her, the eponymous "findings" represent moments of temporary elevation and constitute a form of

¹⁴ Apart from 'to flicker' Jamie also adopts the verb 'to tilt' from Baker (see Mackay, 2014, p. 84).

resistance against social norms. Yet, instead of adopting the redemptive prose style of Baker, Jamie combines her epiphanies with comic elements, thus subverting the danger of the anti-social. Epiphanies in nature essays constitute textual moments in which the essayistic subject speaker is relieved from social ties. Because of the hybrid form of the essay, epiphanic passages usually do not stand in isolation. They appear together with zoological facts and empirical descriptions that counter-balance anti-cultural elements by revealing the benefits of interaction between different lifeworlds. In the following chapter I am going to continue this discussion of how essayists stage human-animal encounters as a way of negotiating intersecting agencies.

3.2 The Dying Animal: Unsettling Human-Insect Relations through Elegy and Irony in Virginia Woolf's *The Death of the Moth* and Robert Musil's *Das Fliegenpapier*

Explorations of epiphanic aesthetics in the previous chapter have shown that spiritual-metaphysical epistemologies often find expression in the use of linguistic innovation, rhythm, and metaphors, in a poetic use of language that the Russian formalists detected in lyrical poetry. In the nature essays I examined, such literary techniques were used to stage the temporary dissolution between different agencies, as writers envisioned both the subjective responses of the speaking subject and the vibrant nature of matter. Human and non-human agencies are also at play in the two modernist nature essays I am concerned with in the present chapter. They feature similar language experiments and techniques of introspection, as is typical of the literary period of modernism (cf. Childs, 2000, p. 3). Apart from this, they are connected through their central motif: insects dying, observed from the point of view of an essayistic first-person narrator.

Virginia Woolf's *The Death of the Moth* (1942) describes the agony of a common moth that takes place on the windowsill of an English country house. This essay will be compared to *Das Fliegenpapier* (*The Flypaper*, 1914) by Musil, which depicts the struggle of flies that have been fatally trapped by a strip of flypaper. I am interested here in the ways in which these texts depict the dying insects as I argue that Woolf chooses a mode of elegy – the literary tradition of lament and loss – whereas in Musil's depiction we can recognize underlying patterns of irony. Both are indicative of the nature essay's metaphysical streak, its penchant to pursue the invisible side of nature. Exploring human relationships with insects, these essays negotiate the human stance as a part of the natural cycle of life and death.

In focussing on small animals, death, and micro-scale observation both essays correspond to crucial scientific developments of the early decades of the twentieth century: modern biology moved into laboratories to magnify microorganisms; ethology dedicated itself to the study of animal behaviour, replacing the older natural history collections of dead specimens; and ecology focussed on the interaction between organisms and their environment. Technological innovations, such as improved microscopes and binoculars, noticeably shaped the modernist essayist's perspective as did the traumatic experiences of mass killings due to the new technologies of warfare in the First World War. Changes in scale, in particular, hint at the experience of the

insignificance of individual human beings in the face of a deadly war and at the fact that although around 1900 the exploration of the world had already started to come to an end, on the micro-level of insects it was still possible to discover the unknown. *Das Fliegenpapier* and *The Death of the Moth* have often been discussed against this backdrop, as allegorical representations of the human struggle with mortality. Musil's text seems to anticipate the traumatic experiences of mass killings in trench warfare,¹⁵ whereas Woolf's text was read as an engagement with the death of her mother and brother (see Richter, 1980).¹⁶ Although mortality is undeniably an important issue, captured in an imagery rich in words from the lexical fields of war and death, it does not explain the great detail and microscopic focus which informs the depictions of agonizing animals in both texts. I argue in this chapter that to read these entomological essays merely as allegories means overlooking the ways in which they interweave zoological discourses, poetic expression, and personal meanings. I propose a reading that takes seriously the fact that both texts feature an animal's name in their title and that the entomological information they provide is accurate. *The Death of the Moth* and *Das Fliegenpapier* are in as much about insects as they are about human-related issues. A literal reading of the insects in these essays enables us to reconsider these canonical texts as nature essay while assessing them within the theoretical framework of ecocriticism may enrich our understanding of human relationships to insects.

In the popular imagination insects are often considered to be a vector "for disease and psychosis (not to mention straightforward pestiferousness)", (2006, p. x) as Eric C. Brown points out. They function as "humanity's Other" (ibid., p. xi; see also Talairach-Vielmas/Bouchet, 2014, p. 14). In keeping with this discourse, the death of an insect in itself normally would not be an event worth dedicating a whole piece of literature to. But this is exactly what these writers do. The fact that Woolf and Musil direct their attention towards the death of an animal so small and common that many people would not even bother to look at them happens to unsettling effects. By 'unsettling', I mean both the act of focussing on the unexpected and an aesthetic strategy in which scales, point of view, and language itself are kept in constant motion, as I will demonstrate in my analyses, starting with Woolf's essay.

¹⁵ For a brief summary of different strands of interpretation – from semiotic to allegorical – cf. Knaap, 1998, pp. 15-16.

¹⁶ However carefully, one needs to regard such interpretations based on biographical evidence, one cannot fail to notice an uncanny resemblance of the words 'moth' and 'mother'.

Virginia Woolf, *The Death of the Moth*

The insect theme of *The Death of the Moth* – which originates most likely in the 1920s, but was only published shortly after Woolf's death in 1942 (see Woolf, 2011a, pp. 442-444) – places it in the context of her lifelong interest in natural history. As a child she had maintained her own entomological collection and Rachel Sarsfield goes so far as to claim that lepidoptera are a "key trope in her work" (2006, p. 88). Later, Woolf pursued this interest in her reading and reviewing of nature writing by the likes of Gilbert White, Henry David Thoreau, W.H. Hudson, and Jean-Henri Fabre (see for instance Woolf, 1917).¹⁷ In her 1939 article *White's Selborne* Woolf points to the unique blend of empirical insect observation, theology, and abstraction in *The Natural History and Antiquities of Selborne*:

His observation of the insect in the grass is minute; but he also raises his eyes to the horizon and looks and listens. In that moment of abstraction he hears sounds that make him uneasy in the early morning; he escapes from Selborne, from his own age, and comes winging his way to us in the dusk along the hedge-rows. A clerical owl? A parson with the wings of a bird? A hybrid? (Woolf, 2011b, p. 192)

Woolf's own entomological essays echo this characterization of White's point of view as an airborne naturalist. Her writing is informed by her knowledge of natural history and driven by a metaphysical longing for what lies beyond the visible sphere. According to Michael Whitworth, this trespassing gaze is characteristic of Woolf's prose in general. He emphasizes her rejection of the Victorian materialist world view which holds that all phenomena can be traced back to matter: "Throughout her fiction and criticism, Woolf expresses a preference for a reality which is semi-transparent" (2000, p. 149). In *The Death of the Moth* this longing for a semi-transparent natural world is realised in the guise of an elegiac descriptive mode that is triggered when the subject speaker becomes aware of decaying life. But let us start from the beginning.

Instead of presenting the eponymous moth as a collectable specimen – something Woolf still did in the earlier personal essay *Butterflies and Moths: Insects in September* (1916), which celebrates the pleasures of the "hunting days" (2011c, p. 382) – *The Death of the Moth* revolves around a living insect in an interior household setting. The animal is not described in terms of taxonomic classification schemes: a broader concept of the species is applied as the predominant mode of observation lies in the act of watching. This focus echoes the historic shift "from the cataloguing of natural

¹⁷ Christina Alt discusses extensively Woolf's interest in natural history in her study *Virginia Woolf and the Study of Nature* (2010). See also Scott, 2012, Chapter 2.

forms to an interest in understanding life processes" (2010, p. 71) that is central to Woolf's engagement with nature, as Christina Alt points out. Jeanne Dubino, in her ecocritical reading, calls *The Death of the Moth* an ethology *en miniature* (see 2013, p. 9) because it observes the whole life, lasting no more than one day, of a specific moth. But before the moth is introduced into the domestic setting, and before the drama of life and death unfolds on the stage of the windowsill, the essay begins with a general reflection on diurnal moths:

Moths that fly by day are not properly to be called moths; they do not excite that pleasant sense of dark autumn nights and ivy-blossom which the commonest yellow-underwing asleep in the shadow of the curtain never fails to rouse in us. They are hybrid creatures, neither gay like butterflies nor sombre like their own species. (Woolf, 2011a, p. 442)

Gay and sombre are not scientific categories. They echo the binaries of day and night, or life and death, that open the essay, hinting at the metaphysical type of insect knowledge Woolf pursues. Zooming in on the moth, the narrator details its visual aspect as if she were using a microscope while paying close attention to the colour of the insect body. Microscopic perspectives – the detailed description from an extremely close narrative point of view – are one of the literary devices frequently used in entomological essay writing.¹⁸ They allow Woolf's narrator to deliver some general, but poeticised information about "the present specimen, with his narrow hay-coloured wings, fringed with a tassel of the same colour" (2011a, p. 442). She describes the wings with the first-hand knowledge of a practised lepidoptera hunter.

Generally, the narrator chooses to address a specific, empirically observed animal ("the present specimen") rather than a generic moth. Within the very first paragraph, the text performs a very essayistic motion. It shifts focus from the mode of general contemplation to a detailed external description that "anthropomorphizes the moth" (Dubino, 2013, p. 9) to a certain degree by equipping it with feelings (the moth "seemed to be content with life") and a gender ("his"). Despite the absence of a Linnaean species designation, the information Woolf's narrator provides on insect shape, colour and size are so precisely chosen that from the details given one could guess that she depicts a bordered straw moth, *Heliothis peltigera* (cf. Bordered Straw).

In a second step, the narrative focus of the essay moves to the living room of the country house. We find the narrator reading at a desk in a room that opens up to the fields outside. She is a place-based narrator, rooted in a local environment that is ap-

¹⁸ Lynn Merrill points out that "microscopic, even myopic" (1989, p. 64), perspectives on nature became frequently used in the age of Victorian natural history.

parently familiar to her. The death of the moth happens in this otherwise peaceful, cultivated setting which is determined by the practices of reading, writing, and harvest work: "It was a pleasant morning, mid-September, mild, benignant, yet with a keener breath than that of the summer months. The plough was already scoring the field opposite the window" (Woolf, 2011a, p. 442). This pastoral routine is unsettled when the narrator becomes aware of the tiny moth on the window-sill. Watching the slow motions of the insect, she remarks that "to have only a moth's part in life, and a day moth's at that, appeared a hard fate" (ibid., pp. 442-443). The shortness of the moth's lifespan is implicitly opposed to the much longer human life. This imbalance in the perception of time and life expectation is also stressed through the use of changes in scale in the narration as the perspective that takes in the open fields outside gradually recedes to provide a close-up of the moth. The eyes of the essayistic narrator transcend the corporeality of the tiny animal, turning it into a symbol of the nature of life:

Watching him, it seemed as if a fibre, very thin but pure, of the enormous energy of the world had been thrust into his frail and diminutive body. As often as he crossed the pane, I could fancy that a thread of vital light became visible. He was little or nothing but life.

Yet, because he was so small, and so simple a form of the energy that was rolling in at the open window and driving its way through so many narrow intricate corridors in my own brain and in those of other human beings, there was something marvellous as well as pathetic about him. (Ibid., p. 443)

Not only the moth seems to be captured by this "enormous energy", the narrator too is affected by it. During a sudden epiphanic moment she realises the inner connectedness of all life. The moth does not appear as "humanity's Other", but as a fellow living being that is set "dancing and zigzagging to show us the true nature of life" (ibid.). Fluctuation is indicated by the abundance of verbs of motion which convey a sense of the intense interaction between watcher and moth and the process of transmission that happens in this scene. Moth and narrator experience a shared moment of being under the spell of this energy, which "dissolves the limits between the nonhuman and human worlds" (Dubino, 2013, p. 9). Bonnie Kime Scott observes that such dynamics of hybridisation feature frequently in Woolf's works, arguing that "Woolf's most memorable natural images rarely stand alone; they fuse with the identity of the animals or human beings who perceive them, or the birds and insects that move among them" (2012, p. 213).

In emphasising that even the tiniest creature can reveal "the true nature of life", the essay echoes a short passage of *Walden*. Given the fact that she wrote an article

about Thoreau it seems not unlikely that Woolf knew the book. In this particular scene, Thoreau's narrator contemplates an insect encounter that occurs in his cabin. He remarks that the hum of a mosquito "was Homer's requiem; itself an Iliad and Odyssey in the air, singing its own wrath and wanderings. There was something cosmical about it; a standing advertisement, till forbidden, of the everlasting vigor and fertility of the world." (Thoreau, 2008, pp. 81-82) Through changes in scale the mosquito becomes the equal of a literary hero. At the same time, the celebration of human warfare and martial dying in literature is given an ironic treatment. Spiritual-metaphysical epistemologies often find expression in reflections like this one, where the narrator observes that there must be more to a living being than the narrow boundaries of its mortal body. The tininess and short life-span of the insect turn it into a perfect object of contemplation, allowing the subject speaker to explore the relationship between visible matter and invisible ties that are, of course, imagined rather than empirically perceived. The narrator of *The Death of the Moth*, in observing the moth closely, quests for what Thoreau's essayistic subject describes in the quoted passage as "something cosmical". Despite the spatial boundary of the window that sets narrator and moth apart from the world outside, a shared energy unites them. By looking at the moth and into the surrounding fields, the gaze of the narrator traverses the surface of the outer world and finds an underlying unity. She notes that the "same energy which inspired the rooks, the ploughmen, the horses, and even, it seemed the lean bare-backed downs, sent the moth fluttering from side to side of his square of the windowpane" (Woolf, 2011a, p. 442).

The word 'hay-coloured' at the very beginning of the text fulfils thus descriptive zoological, narrative, and even epistemological functions. In describing the moth as hay-coloured, Woolf enforces her vision of an underlying interconnectedness between organisms, the autumn landscape and the seasonal cycles. The unity of nature is already implied in her description techniques and in the visual language of the essay. Through the isotopy of harvest Woolf incorporates a lexical field in her essay that implies the seasonality of nature and hints at the overarching theme of the natural cycle of life and death.

With the life energy suddenly retreating from it, the moth's body fails to continue its vivid motions. The moment of decaying life is presented in terms of a transition from organic life to cold, inanimate technology as is typical of modernist

literature's take on nature (cf. Goodbody, 2007, p. 121). In another epiphanic scene, the narrator further chronicles decay, hesitating whether to intervene or not:

I watched these futile attempts for a time without thinking, unconsciously waiting for him to resume his flight, as one waits for a machine, that has stopped momentarily, to start again without considering the reasons for its failure. [...] The helplessness of his attitude roused me. It flashed upon me that he was in difficulties; he could no longer raise himself; his legs struggled vainly. But as I stretched out a pencil, meaning to help him to right himself, it came over me that the failure and awkwardness were the approach of death. (Woolf, 2011a, pp. 443-444)

Woolf's narrator observes the ever slower motions of the moth's agony empathetically. She lifts her pencil on two occasions in a vain attempt to help the struggling moth. Woolf, while primarily considering to touch and revive the dying animal with her pen, reflects on the writing process and on the futility of writing, yet she maintains its power of affirmation, in the sense that she describes not a dead moth but its death which, even if it marks the end of life, is still part of it. The approach of death is not presented as a violent rupture, but comes as a slow regular motion that happens in sequence with the organic cycle of life. Looking at the moth and beyond it, Woolf's narrator imagines "an oncoming doom which could, had it chosen, have submerged an entire city, not merely a city, but masses of human beings; nothing, I knew had any chance against death." (Ibid., p. 444) Agency in this reflective passage, and in many other parts of the essay, is decentred from the human narrator. An impersonal force seems to drive the action. It is an energy capable of seizing a whole eco-system, including the narrator and the moth. Although Woolf's narrator is in no immediate danger of dying, she is facing her mortality and is humbled in this realisation. Instead of fostering a nature-culture divide, she reveals her impotence and lack of agency in face of this greater force she shares with lepidoptera. Not only "the little hay-coloured moth" (ibid.) is helpless when it comes to dying, humans are affected by death just like the tiniest insects. Seeing things from a broader perspective, Woolf's narrator accepts that mortality is the price we have to pay to live. To live means to be part of a greater mesh of interrelations that features numerous ecological interdependencies of which humans are part too.

The metaphysical category of life forces determines the perspective of this essay. Bonnie Kime Scott points out that this "construct suggests the Gaia concept of the globe as a united, living thing, a holistic concept" (2012, p. 184), and she goes on to argue that with "her sense of shared energy, respect for composure, and common yielding of death, Woolf develops unity and solidarity across distant species." (Ibid.)

Woolf's vision of interconnectedness also recalls Alexander von Humboldt's holistic point of view as discussed in Chapter 2. The German naturalist explained his worldview scientifically, by outlining, for instance, the hot air streams that carry spores and tiny insects around the globe and help to spread vegetation even to very remote locations. Woolf, in contrast, develops a more metaphysical approach. In the environment she depicts, causes and effects are not explained with regard to empirical processes, but through a subjective interpretation of the essayistic speaker subject whose gaze transcends the physical world.

The agony depicted by Woolf is, accordingly, neither the result of a human wish to engineer the environment, nor does it happen in the context of natural history collections. The eponymous death of the moth is the final destination of the cycle of life and the essay consequently aims for this terminus in slowly drifting, yet teleological movements. Death is inevitable as suggests the elegiac tone of the essay. In the modern tradition, elegy denotes the "framing of loss" (2010, p. 1), as Karen A. Weisman observes. In this sense, "elegy can be pulled between the worlds of the living and the dead, between the present life of sorrow and the vanished past of putative greater joy." (Ibid.) The moth's agony is framed not as the meaningless death of "humanity's Other", Woolf's essayistic narrator rather sees the human condition paralleled in the insects' death. This is important from an ecocritical point of view. By paying so much attention to the moth's death, Woolf creates a constellation in which the reader is forced to reconsider the value of this seemingly unimportant animal. Awareness of interspecies fellowship is transmitted in the moment where the narrator understands that like the moth she herself, and with her the human community at large, are subject to the greater cycles of life and death.

Robert Musil, *Das Fliegenpapier*

Das Fliegenpapier, a text of approximately two pages, also confronts us with insects dying. But where Woolf's essay unfolds an elegy around the event of natural death that affects even the tiniest creature, Robert Musil depicts a more violent death scene that occurs on the eponymous strip of flypaper. Written in late 1913,¹⁹ Musil's essay was first published shortly before the Great War in a small Heidelberg-based maga-

¹⁹ A draft version of *Das Fliegenpapier* can be found in Musil's diary of November 1913. See Musil, 1976, pp. 284-285; 1998, pp. 165-166.

zine called *Argonauten* (cf. Brokoph-Mauch, 1985, pp. 82-83). Later it was included, together with 29 other texts, in the prose collection *Nachlass zu Lebzeiten* (*Posthumous Papers of a Living Author*, 1936). *Das Fliegenpapier* opens the first of four sections, entitled *Bilder* (*Pictures* – a hint at the dense imagery that characterizes the prose style). In his diary, Musil also refers to this section as the "Tierbuch" (1976, p. 340. "Book of animals") since many stories in the first part feature animals: the monkeys of *Die Affeninsel*, horses in *Kann ein Pferd lachen?*, and the sheep of *Schafe, anders gesehen*, to name but a few. Ewout van der Knaap (see 1998, p. 168) points out that in 1910/11, and thus roughly around the time when the first draft version of *Das Fliegenpapier* was sketched, Musil's diary records his involvement with biology as well as his reading of what is probably the most famous work of zoology written in German-language: *Brehms Tierleben* (*Brehm's Life of Animals*) that might have been an influence.

Musil shares with Woolf and many other nature essayists a rootedness in two discourses. At the turn of the century, he had studied engineering in Austria and Germany in addition to pursuing a literary career.²⁰ Later he completed a dissertation on the Austrian physicist and philosopher Ernst Mach that illustrates his ongoing dialogue with natural science (see Gittel, 2013; Gamper, 2011). Where Woolf's engagement with the life sciences reverberates through *The Death of the Moth*, the deeper impact on Musil's writing seems to be laboratory science. His first-person narrator presents us with an experiment-style test assembly (cf. Drügh, 2001/2002, p. 169) in which insects are killed by a man-made tool. The very first sentence outlines the setting, as it ironizes the obsession with hard facts of the *Neue Sachlichkeit* (see Knaap, 1998, p. 166):

Das Fliegenpapier Tangle-foot ist ungefähr sechsunddreißig Zentimeter lang und einundzwanzig Zentimeter breit; es ist mit einem gelben, vergifteten Leim bestrichen und kommt aus Kanada. Wenn sich eine Fliege darauf niederläßt – nicht besonders gierig, mehr aus Konvention, weil schon so viele andere da sind –, klebt sie zuerst mit den äußersten, umgebogenen Gliedern aller ihrer Beinchen fest. (Musil, 1957, p. 450)

Tangle-foot flypaper is approximately fourteen inches long and eight inches wide; it is coated with a yellow poison paste and comes from Canada. When a fly lands on it – not so eagerly, more out of convention, because so many others are already there – it gets stuck at first by only the outermost joints of all its legs. (Musil, 1987, p. 5)

²⁰ Musil passed his engineering exam on 18 July 1901 with the mark "very competent" (see Corino, 2007, p. 425).

In this set up humans and insects meet as antipodes. Trapped by the glue, the insects suffer an unnatural death. The flypaper evokes discourses of pestiferousness as it symbolises the human wish to engineer the domestic sphere by eliminating flies from it. Observing the fly's gradual collapse with great attention, Musil's narrator conducts an experiment that seems cruel in that the human eye is conscious of the approaching death, whereas the fly itself is not – at least according to the current state of research. The essayistic subject speaker initiates this clash by setting up a mass-produced household device as a stage for the fly's agonizing dance.

As distinguished from other animal texts in *Nachlass zu Lebzeiten*, *Das Fliegenpapier* refrains from pursuing any greater fictional story-line and sticks closely to its empirical animal subject. The narrative is slowed down to a point where the depicted animals become strange again and we get the chance to see them in new ways (cf. Drügh, 2001/2002, p. 183). In its length, its linguistic precision paired with astute and unsparing visual descriptions, it most notably resembles Eliot Weinberger's *Naked Mole-Rats* – analysed in Chapter 2.3. As in the case of Weinberger, a first-person narrator who speaks from a rather secluded point of view, does not directly interact with the flies but remains a passive observer throughout. His engagement becomes visible in the descriptive mode. Musil's narrator rarely expresses his thoughts in such a direct manner as when he looks at the flies and says: "Sie stehen da, und ich fühle, wie ratlos sie sind." (1957, p. 450) / "They stand there and I feel how helpless they are." (1987, p. 5) He is typically essayistic in that he sets in motion a dynamic of associations when he describes the struggling flies subsequently in terms of "Negeridole" (1957, p. 450) / "African idol[s]" (1987, p. 5), "Frauen, die vergeblich ihre Hände aus den Fäusten eines Mannes winden wollen" (1957, p. 451) / "women who attempt in vain to wrest their hands free of a man's fists" (1987, p. 6), or a figure attempting to move a load that is too heavy, "tragischer als Arbeiter es tun" (1957, p. 450) / "more tragic than the working man" (1987, p. 5). I, therefore, suggest an understanding of *Das Fliegenpapier* as a type of essay in which Musil neglects reasoning and contemplation in favour of the levels of visual description and introspection.²¹ Discourse-wise it is striking that he links the fly's victimhood to colonial imagery, the suffering of violated women, exploited workers, and not least war horses. There is, thus, a pattern of victimhood and violence implicit in these comparisons, which hints at the dynamics of violent rupture the moment of getting

²¹ Musil's text has been described as an essay before (see Nübel, 2006, p. 470).

stuck means for the fly. Caught by the flypaper, the insects are cut off from their natural life cycles as an untimely death sets in.

The deadly trap evokes a powerful cultural story template: the biblical Fall. Only the loss of Edenic harmony has led to distinctions between useful and beautiful animals such as livestock, menacing beasts and vermin. Original sin introduced mortality and division into human and non-human lives. According to Carolyn Merchant, the "Recovery of Eden story is the mainstream narrative of Western culture. It is perhaps the most important mythology humans have developed to make sense of their relationship to the earth." (2013, p. 2) In keeping with Merchant, the attempt to kill a fly, an insect that can act as transmitter of illnesses and contaminates food, can be understood as the attempt to re-establish Edenic harmony by engineering the environment according to human ideals. The flypaper as such, consequently, represents the human-insect binary, fostered by discourses of pestiferousness. But while the text minutely outlines its function, its aesthetics unsettle this underlying dichotomy. This happens, for instance, when, at the end of the first paragraph, Musil's narrator ponders on the question of what the moment of getting stuck actually means for the flies. He compares it to

[e]ine ganz leise, befremdliche Empfindung, wie wenn wir im Dunkeln gingen und mit nackten Sohlen auf etwas träten, das noch nichts ist als ein weicher, warmer, unübersichtlicher Widerstand und schon etwas, in das allmählich das grauenhaft Menschliche hineinflutet, das Erkanntwerden als eine Hand, die da irgendwie liegt und uns mit fünf immer deutlicher werdenden Fingern festhält. (1957, p. 450)

[a] very quiet, disconcerting sensation, as though while walking in the dark we were to step on something with our naked soles, nothing more than a soft, warm, unavoidable obstruction, and yet something into which little by little the awesome human existence flows, recognized as a hand that just happens to be lying there, and with five ever more decipherable fingers, holds us tight. (1987, p. 5)

The moment of getting stuck is evoked as an eerie physical sensation that takes place in the dark. Sigmund Freud famously defined *das Unheimliche* in terms of the type of horror brought about by the well-known and familiar that suddenly becomes strange (see 1969/1970, p. 244; 2003, p. 124). The comparison between flypaper and dark room defamiliarises the scene. To enter this imaginary room together with the flies is uncanny because the flypaper, a common and familiar accessory of early twentieth-century kitchens, suddenly becomes strange. As a consequence, the essay unsettles the notion of insect-traps as useful and harmless tools to kill vermin by relating them to imagery of the uncanny.

As in Woolf's essay, a greater force that seizes all life appears in the personification of a hand, lying on the dark floor. Based on the assumption of a shared physical experience Musil's narrator seems to suggest that despite the fact that flies, unlike humans, are probably not conscious of approaching death, a shared physical sensation might connect us.²² Musil's narrator compares the motions of the struggling flies to similar physical experiences made by humans, such as

der Augenblick, wo ein Kletterer wegen des Schmerzes in den Fingern freiwillig den Griff der Hand öffnet, wo ein Verirrter im Schnee sich hinlegt wie ein Kind, wo ein Verfolgter mit brennenden Flanken stehenbleibt. Sie halten sich nicht mehr mit aller Kraft ab von unten, sie sinken ein wenig ein und sind in diesem Augenblick ganz menschlich. (1957, p. 450)

the moment when the mountain climber because of the pain in his fingers willfully loosens his grip, when the man lost in the snow lays himself down like a child, when the hunted man stops dead with aching lungs. They no longer hold themselves up with all their might, but sink a little, and at that moment appear totally human. (1987, p. 6)

This could hint at an underlying concept of the continuities between nonhuman and human bodily sensations. Ecocritics like Stacy Alaimo have recently described this phenomenon in terms of "transcorporeality" – the dynamics through which bodies are "ultimately inseparable from 'the environment'" (2010, p. 2) because they constitute an interface with the material world – asking us to unsettle conceptual separations by emphasising mutual vulnerabilities. Musil's narrator reveals the shared experience of decaying body forces, but there is also an ironic dimension to his anthropomorphising comparisons.

David Lodge explains how in "rhetoric, irony consists of saying the opposite of what you mean, or inviting an interpretation different from the surface meaning of your words." (1992, p. 179) The passage quoted above qualifies as ironic in that the narrator uses a multitude of comparisons which introduces an element of liquidity into the mode of description. New comparisons are repeatedly added as if every single one of them was incapable of generating true meaning. Musil's text moves through a series of metaphors that add "levels of blurring and imprecision instead of clarifying allegorical meaning" (2015, p. 262), as Andreas Huyssen points out. The result is a dynamics through which preformed discursive patterns are unhinged. The ambiguity of irony destabilises discursive norms, such as the ideology of pestiferous animals. It helps to undermine one-dimensional insect representations, challenging prevalent discourses on insects. But it also runs contrary to Woolf's practice of embedding a

²² Andreas Huyssen, therefore, observes that Musil goes beyond the allegorical depiction of insects: "It is as if these flies *are* humans instead of referring to humans" (2015, p. 263).

living being into a shared ecological network. In the context of ecology, irony serves a function that counters the holistic network imagination because it negates meanings rather than generating them (cf. DiCaglio, 2015, p. 459). In *Das Fliegenpapier* irony happens as an overturning of the principle of insect description. Through cascades of similes and metaphors Musil's narrator exposes the shortcomings of anthropomorphic description techniques. Irony critiques the reader's expectations that an insect can be put on paper and captured in writing and challenges their conceptual sense of the insect. Where Woolf's narrator depicts a moment of interspecies kinship that queries the human-animal divide by pointing to interconnections, for Musil the motion of unsettling becomes the central dynamic that drives the essay and keeps its language in motion. Though caught by the flypaper, the flies seem to resist literary depiction through the narrator, who exhibits his struggles to come up with the right similes. Despite the objective descriptive mode that opens *Das Fliegenpapier*, the text thereby supports the message that what truly matters lies beyond the material sphere. It cannot be captured in the mode of visual description.

The text resists any clear interpretation of the dying animal. It makes no statement about how to judge the killing of the flies. The horrible images of war²³ and suffering – in which the dying flies appear as "gestürzt[e] Aeroplan[e]" (Musil, 1957, p. 451) / "crashed planes" (1987, p. 6), "krepirt[e] Pferd[e]" (1957, p. 451) / "dead horses" (1987, p. 6), "klapprige alte Militärs" / "decrepit old soldiers", inhaling "verwirrende Dünste" (1957, p. 450) / "[b]ewildering vapors" (1987, p. 5) – produce an expectation of a moral or an allegorical explanation that is, however, ultimately rejected by the text. Musil leaves the readers with the task of generating meaning from death. There is an unsettling playfulness involved in the mode of watching and describing that peaks in the last paragraph. Referring to the need for a microscope, the narrator returns to the scientific framing that opens the essay. He describes the insect body in great detail, imitating, in writing, the optical magnification of a microscope:²⁴

Und nur an der einen Seite des Leibs, in der Gegend des Beinansatzes, haben sie irgendein ganz kleines, flimmerndes Organ, das lebt noch lange. Es geht auf und zu, man kann es ohne Vergrößerungsglas nicht bezeichnen, es sieht wie ein winziges Menschaugen aus, das sich unaufhörlich öffnet und schließt. (1957, p. 451)

And only on the side, near their legsockets, is there some tiny wriggling organ that still lives a long time. It opens and closes, you can't describe it without a

²³ It is possible to read *Das Fliegenpapier* as an anticipation of the haunted landscapes of the European trench war to come. Herbert Kraft, for instance, reads it as an allegory of a new technique of warfare, called into action only slightly later on the European battlefields (cf. Kraft, 2005, p. 62).

²⁴ On the process of zooming in in *Das Fliegenpapier* see Röttger, 1981, p. 510.

magnifying glass, it looks like a miniscule human eye that ceaselessly opens and shuts. (1987, p. 7)

Through this macro shot of the fly a tiny organ is revealed. It is empirical in that Musil describes an organ that actually features on the side of a common fly's body and that flies use to communicate with each other through signals of fluorescent light. This organ was only discovered and named by scientists in the 1980s, as van der Knaap reveals (cf. 1998, p. 170). But it is also metaphysically charged. It is no coincidence that the fly's organ looks like a human eye, which in the romantic imagination is, of course, the mirror of the soul. By equipping the flies with a soul that continues to live while the rest of the body has ceased to do so, Musil once again invokes the atmosphere of the uncanny. His depiction unsettles the subject-object relation between man and insect as the flies are presented as eerie hybrid creatures equipped with the power to look back. Pointing to the gaze of the fly, Musil de-centres the point of view of the human watcher.

Both *The Death of the Moth* and *Das Fliegenpapier* destabilize preformed framings of human-insect relations. By establishing lateral ties between the human narrator and the insect Woolf decentres and re-scales the standpoint of humans in the face of a magnified insect. Musil's text evades firm meanings by engaging in a playful game with similes and metaphors. Despite their microscopic size the struggle of the insects conveys a strong sense of what it means to face the bleakness of the approaching end. Musil's and Woolf's essayistic subject speakers see human mortality reflected in the insects' agony as they contemplate the experience of being exposed to a greater natural force. The knowledge these metaphysical essays pursue is the knowledge of the nature of interspecies fellowship with regard to mortality. Where Woolf stresses the organic cycle of life and thereby reflects human ephemerality, Musil challenges human attempts to engineer the environment by presenting us with the defamiliarising close up of a strip of flypaper. By anthropomorphizing the dying flies to a degree that the text exhibits vehemently its own textuality, Musil queries the process of framing an insect in itself and thus counteracts the notion that the human condition is actually paralleled in the insects' death. Both essays feature numerous shifts in focalization. They alternate between outbound descriptions of insect bodies and moments in which the gaze of the narrators transcends the empirical surface, in search of metaphysical insights into the meaning of life and death. Each of them recreates moments of empathy with the dying animal while acknowledging limits of understanding. Thereby they both challenge discourses of pestiferousness. In doing so, *The Death of*

the Moth generates an elegiac mood, whereas *Das Fliegenpapier* makes use of ironic patterns. This allows them to imagine "a conceptual space where the entity called 'human' becomes situated in a new relation to the entity called 'nature'." (DiCaglio, 2015, p. 453) The following chapter further traces this transformative potential of the essay.

3.3 Tales of Transformation and Experience: Thoreau's *Walden* and Andreas Maier and Christine Büchner's *Bullau. Versuch über Natur*

A decisive moment in nature essay history comes when Henry David Thoreau, on American Independence Day of 1845 (cf. Thoreau, 2008, p. 42), decides to move into a cabin on the shores of Walden Pond to live a simple life in close communion with the natural world. Speaking from its margins, Thoreau radically challenges and works through some of the founding principles of American society, such as the belief in property, trade and consumerism, in order to arrive at "the essential facts of life" (ibid., p. 83). In retrospect, the account he gives of his retreat resembles a process of spiritual transformation – not coincidentally so, since transformation was what determined the experiment from the beginning. The metaphysical-spiritual telos that shines through *Walden's* discourse appears as the impulse to re-integrate human life into a more natural framework of living. Thoreau's *Walden* project is metaphysical in that it pursues an ideal, in attempting to improve society, that exists independently of each individual within this society. The good life, as Thoreau imagines it in his vision of simplicity, is not attached to a particular person because it would continue to be good even if there was no one to live it. In the case of *Walden* the metaphysical-spiritual dimension lies in the story of Thoreau's environmental awakening. While he presents his readers with numeric tables to copy his experiment, he maintains that the purpose of these specific manual-style instructions is not confined to the physical world. Rather, they serve as a means to an end whose vanishing point lies beyond its material realization. It is presented as a desirable state of consciousness, one of oneness with the surrounding world. In plants, animals and whole landscapes, Thoreau's narrator finds this ideal of harmony realised and therefore attempts to immerse himself into the world that surrounds him. Although the essay cycle "has no 'plot' in the ordinary sense of the word, no continuous narrative line, at least in a figurative sense it tells the story of Thoreau's life-transition" (1996, p. 942), as Buell notes. *Walden* stages this life-transition as a process of oblivion and re-awakening. Both are typical tropes of what I propose to discuss in this chapter as tales of transformation and experience.

In the chapter *The Village*, Thoreau's narrator emphasises that social detachment serves as a precondition for spiritual self-improvement because:

not till we are completely lost, or turned round [...] do we appreciate the vastness and strangeness of Nature. Every man has to learn the point of compass again as often as he awakes, whether from sleep or any abstraction. Not till we

are lost, in other words, not till we have lost the world, do we begin to find ourselves, and realize where we are and the infinite extent of our relations. (2008, p. 154)

Stressing the need to forget established premises about our existence, Thoreau's essayistic speaker asks his readers to reverse conventional patterns of perception in order to allow for a new understanding of our position in the world. Bill Niven argues that this dynamics of replacing social conditioning with environmental awareness is a defining template of the green *Bildungsroman*. Instead of fostering the established moral code, this subgenre of the novel of formation promotes "the gradual disengagement of a fully adapted individual from the dominant social, intellectual and professional norms. This process is one of unlearning, of coming to question and even discard accepted wisdoms." (1997, p. 198) The green *Bildungsroman* is meant to "unravel the fabric of integration which the traditional *Bildungsroman* strives to create" (ibid.),²⁵ in order to replace it with a re-orientation towards environmental values. Thoreau's writing is shaped by such strategies of unlearning as he calls accepted wisdoms into question. While the process as such may be put to use to ethical effects, this chapter argues that nature essayists often adopt such reversed patterns of education because they believe in an underlying ideal of living: a metaphysical telos. It, therefore, makes sense to expand Niven's model from fictional to nonfictional genres and to use it in the context of transformation experiences.

Resistance to pre-formed patterns of perception, implemented by social conditioning, can be linked to the anti-dogmatic tradition of the essay genre. More than any other literary genre, the essay stands up against ready-made opinions and established social matrices.²⁶ Essayistic writing searches for truths, precisely by challenging "the ideal of [...] undubitable certainty" (1991, p. 14), as Adorno put it. In an attempt to break up accustomed patterns of thinking and acting, it gives weight to specific experiences. The nature essay reminds readers that alternatives are possible. By turning transformation experiences into essays, and reliving them through words, the process of coming to an understanding of human embeddedness in a multitude of human and nonhuman relationships becomes discursive.

Many nature essays are characterised by high levels of nature awareness, as expressed in the centrality of the environment, but not every one of them describes a

²⁵ Niven exemplifies this hypothesis by analyzing three German-language examples: Max Frisch's *Homo Faber* (1957), Uwe Timm's *The Snake-Tree* (1986) and Friedrich Cramer's *Amazonas* (1991).

²⁶ Although many essays are equipped with the capacity to see our environment in previously unknown ways, it should be noted that equally many lack the utopian edge of essayistic thought experiment (cf. Zima, 2012, p. ix).

transformation experience. This raises the question of how to distinguish those essays that do from those that do not. The most outstanding feature of transformation experiences is the before and after template. Descriptions of the transition from a condition of unawareness to awareness embody transformation. The textual self which has undergone this event usually provides the principal "focalizing device" (Atkins, 2005, p. 58) of the essay. This means that transformation stories often take the shape of the personal essay, which features "the clear imprint of the author's personality" (Werner, 1997, p. 655). Essays describe environmental formation as a process in which the human subject opens itself to the surrounding world and becomes sensitive to the sublime. In its most radical form this results in the vanishing of a person. J.A. Baker's previously discussed *The Peregrine* would fit this model. But there are limits to transformation because there is a threshold of passing into something other. The essay presents itself as a form of going back and forth between states of ignorance and awareness. Transformation manifests itself not only in explicit contemplations of change, but also in other textual features. While stories of transformation are related to the previously discussed epiphanic aesthetics with respect to their revelatory character, their duration sets them apart. Epiphanies are defined by their momentary suddenness, a temporary stylistic elevation in the textual pattern, which stands out against the more consistent slow process of learning that marks transformation. By increasing the volume of outbound empirical descriptions, for instance, essayists illustrate the degree to which their sensitivity towards the environment has altered. Features previously discussed in Chapter 2 on encyclopaedic-scientific writing, such as enumerations, can also form part of tales of transformation experiences. An increased nature-awareness, accordingly, is not always already a metaphysical phenomenon. The textual performance of transformation, however, is often deeply grounded in spiritual imagery. Motifs of re-awakening or rebirth tie in with religious discourse and the vocabulary used in this context is often metaphysically charged. It highlights immaterial processes such as "emotional regeneration, discovering instinct, spontaneity and sensual awareness" (Niven, 1997, p. 200).

This chapter turns once again to *Walden* – the book that provides a major source of the paradigm of environmental re-orientation (see Buell, 1995, p. 23). Thoreau's essay cycle constitutes what is probably the most influential literary document of an environmental transformation experience. Traces of its impact can be found in a wide range of artworks, spanning from German nature essayists like Wilhelm Lehmann in

the 1930s, the American counter-culture of the 1960s and 70s to contemporary culture (see Parini, 2008; Siebald, 2013). Structural affinities between nature essays from highly different cultural and historical contexts exist also beyond traceable intertextual currents. By comparing *Walden* to a contemporary German nature essay, *Bullau. Versuch über Natur* (*Bullau. An Essay on Nature*, 2006) by the novelist Andreas Maier and his wife Christine Büchner, I will demonstrate that, even beyond intertextual relationships between individual works of art, recurrent aesthetic patterns can be found that justify speaking of transformation narratives as a vital feature of metaphysical-spiritual nature essay discourse. *Walden* and *Bullau* represent two different models of transformation. Thoreau presents growing environmental awareness as an ongoing process of spiritual immersion in a determined physical environment that demands the critical unravelling of social conditioning; *Bullau*, on the other hand, pictures a determined turning point, a moment of revelation that bears a strong nostalgic component.

Henry David Thoreau, *Walden*

Over the course of *Walden*'s 18 chapters Thoreau performs his emerging awareness of the natural world by adopting strategies of unlearning and re-orientation. Take, first of all, the beginning where Thoreau's narrator briefly outlines the basic conditions under which his experiment took place:

When I wrote the following pages, or rather the bulk of them, I lived alone, in the woods, a mile from any neighbor, in a house which I had built myself, on the shore of Walden Pond, in Concord, Massachusetts, and earned my living by the labor of my hands only. I lived there two years and two months. At present I am a sojourner in civilized life again. (2008, p. 5)

As an opening this passage is interesting with respect to its treatment of space and time. Thoreau's essayistic subject speaks in the present tense and from a point where he has already left behind his cabin. By contrasting past and present, he establishes a minimal timeline that functions as a reduced form of before and after template. Adopting a retrospective perspective, the narrator describes how his retreat from society has left him changed to a degree that he can only describe himself as a "sojourner in civilized life". From the start, he frames himself as an outsider who gets a better point of view on society by withdrawing from it into "the woods". Marginality constitutes an important precondition for the freedom of essayistic thinking and prepares the unravelling of social norms that follows.

Applying the scheme of a reversed *Bildungsroman*, Thoreau gradually subverts the social conventions of modern life. The first section of *Walden*, in particular, is dedicated to the goal of unlearning the social conditioning most people are subjected to from the earliest days of their lives. This process can take the shape of micro-narratives, as in the chapter *The Bean-Field* where the narrator contrasts the "sacred origin" (ibid., p. 149) of his own mind-enhancing practice of husbandry with conventional market-based principles, and in doing so "de-economises" (Schulz, 1997, p. 47) the bean-field, by insisting on the agency of plants (cf. Cafaro, 2004, p. 155). But more often than not, the practice of unravelling takes place as a reflective, essayistic process. The long first chapter *Economy*, in particular, prepares the deconstruction of established social conventions. Since this chapter lays the ground for the spiritual transformation that takes place later on, it stands at the beginning of *Walden*. Before turning his attention towards the nonhuman world, Thoreau's narrator identifies social structures that prevent people from perceiving the full richness of organic life by setting out to challenge these mechanisms.

The greatest disadvantage of modern American society, according to the speaker subject, is the deprivation of life time humans suffer when they are exposed to the world of employment.²⁷ Work deprives them not only of their spare time, but also of the leisure that is necessary to respond to the world with ease. Working people are "so occupied with the factitious cares and superfluously coarse labors of life that its finer fruits cannot be plucked by them. Their fingers, from excessive toil, are too clumsy and tremble too much for that." (Thoreau, 2008, pp. 7-8) Symptoms of alienation and detachment are captured in the image of the worker's shaking hands. The floral symbolism illustrates the effects of exploitation, revealing the incompatibility of an industrial working life and a rewarding nature experience. A first step on the path towards spiritual transformation, therefore, must lie in the reduction of working hours. Yet, only few people decide to try out alternative lives because they see the existing social order as a given. In a typically essayistic gesture, Thoreau counters the assumption that "there is no choice left" (ibid., p. 10), by stressing: "[n]o way of thinking or doing, however ancient, can be trusted without proof." (Ibid.) And he later continues: "This is the only way, we say; but there are as many ways as there can be drawn radii from one centre." (Ibid., p. 12) Echoing Mon-

²⁷ Brian Walker calls *Walden* a "carefully constructed study of the tensions between liberty and employment in times of economic change" (2009, p. 40).

taigne's anti-dogmatic frame of mind, Thoreau asks his readers not to accept social norms uncritically, but to adopt an essayistic stance of deliberate uncertainty.

Thoreau sets out to free up time that is usually spent working. One way of reducing one's working hours lies in a radical reduction of comfort – encapsulated in the formula: "Simplicity, simplicity, simplicity!" (Ibid., p. 84) By spending less money on superfluous luxuries we need to work less and gain time to contemplate "the true problems of life with freedom and a prospect of success." (Ibid., p. 13) Thoreau's own life in a wooden cabin functions as an example, or a test assembly, of the most basic version of alternative living. Imitating the instructive style of the guidebook, he uses numeric tables to list his income from raising beans and land surveying and his expenses for the essential necessities of life, namely: "Food, Shelter, Clothing, and Fuel" (ibid.). To a certain degree these tables demonstrate the feasibility of his experiment by offering instructions on how to copy it, but they also parody and unravel "America's methods of evaluation" (Cavell, 1992, p. 30). Leonhard N. Neufeldt argues that Thoreau not only adopts, but also subverts the rhetoric of the guidebook – a genre that flourished by the mid-nineteenth century. He notes that strategies of "lexical and semantic manipulation" (1989, p. 157) allow Thoreau to evoke and challenge the guidebook's aim to establish social conventions that lead young men to successful careers. The slightly ironized adaptation of the guidebook style, accordingly, ties in with the trope of unlearning.

Thoreau's appeal for simplicity is more than an expression of his pragmatism. It is grounded in a set of values that contrast strongly with consumerist visions of the good life. According to *Walden*, established American values are a major source of human desperation and the essay cycle therefore sets out to query them. At one point, for instance, Thoreau's narrator challenges the benefits of ownership in a gesture of rhetorical twisting when he invokes and opposes property and freedom: "I am wont to think that men are not so much the keepers of herds as herds are the keepers of men, the former are so much freer." (2008, p. 51) In another famous passage from the second chapter, *Where I Lived, and What I Lived For*, he questions the necessity of trade, communication and travelling:

Men think it is essential that the *Nation* have commerce, and export ice, and talk through a telegraph, and ride thirty miles an hour, without a doubt, whether *they* do or not; but whether we should live like baboons or like men, is a little uncertain. If we do not get our sleepers, and forge rails, and devote days and nights to the work, but go to tinkering upon our *lives* to improve *them*, who will build railroads? And if railroads are not built, how shall we get to heaven in season? But if

we stay at home and mind our business, who will want railroads? We do not ride on the railroad; it rides upon us. (Ibid., pp. 84-85. Thoreau's emphasis)

Thoreau opens this passage with the phrase "Men think..." – as a statement it summarizes common assumptions about progress and in doing so exhibits an existing norm from which the text gradually diverges. Rhetorically this happens as a shift in point of view. At first we are presented with the opinion of an imagined majority. Their voice is represented in the third person plural that implies an external view. After the semicolon, however, focus shifts inwards and we get to hear the voice of an unspecified collective "we". This shift is emphasised through italics and establishes a counter community while it sets those who advocate the norm at a distance. Adopting the image of metal work, captured in the verb 'to tinker', Thoreau suggests that we improve our actual lives instead of our transport links as he switches from the physical into the metaphysical sphere. He further continues to unsettle accepted wisdoms about progress through a rhetorical treatment rich in inversion and irony. It peaks in the antithetical juxtaposition of the famous last sentence "we do not ride on the railroad; it rides upon us".

Stanley Cavell in his seminal 1972 study *The Senses of Walden* points out that in order to liberate himself from the prevalent social norms Thoreau needs to "win back from it possession of our words" (1992, p. 92). According to Cavell this is as much a textual as an empirical act. He even speaks of a "literary redemption of language" (ibid.) that happens through his use of the paradox, the wordplay and the apothegm. In the passage quoted above, inversions are used to the effect that the original significance attributed to the railway (progress) is called into question. This goes to show that the dynamics of unravelling established social matrices "requires replacing them [the words] into a reconceived human existence." (Ibid.) But how do we have to imagine this reconceived form of existence? And what comes after the process of unlearning is completed? Stephen Fender argues that while Thoreau works against some powerful American dogmas, he adopts others:

On one level, and especially in 'Economy', *Walden* seems to challenge the American ideals of hard work, deferred gratification, and the importance of ownership. At the same time, it seems to re-enact another powerful constituent of national identity, the myth that a man (it is almost always a man) somehow grows to American maturity through an initiation on the isolated frontier. (2008a, p. xxii)

This observation points to the concurrent modes of unlearning and transformation. Although Fender is right in assuming that *Walden* fosters its own American myth, I would argue that both processes are inseparable. By combining the challenging of

American ideals *and* the discovery of a new self in nature the essay cycle works towards a modified moral framework. Together they represent a typical pattern of the green *Bildungsroman*. This poses the question of what transformation narratives do to the masculine frontier myth. *Walden* suggests that radical environmentalism can take possession of this myth and transform it.

Motifs of renewal and awakening help to stage the spiritual transition from one state of mind to another. Throughout the text, Thoreau relies on a multitude of sleep-related images (see Reiss, 2013) that are connected with tales of transformation experience. In *Where I Lived, and What I Lived For*, for instance, Thoreau's narrator depicts people who remain in a state of unawareness because they adapt to social norms as sleepers: "By closing the eyes and slumbering, and consenting to be deceived by shows, men establish and confirm their daily life of routine and habit every where" (2008, p. 88). Yet, in order to conceive the richness of life around us, "[w]e must learn to reawaken and keep ourselves awake" (ibid., p. 83). Childhood represents such a peak in alertness, which is why the text stages his retreat into nature as a spiritual return to origins. The narrator claims that a life in harmony with the surrounding world can be achieved through mental exercise. It is a state of consciousness he associates with children. In *The Bean-Field*, we therefore learn about Thoreau's first encounter with Walden Pond:

When I was four years old, as I well remember, I was brought from Boston to this my native town, through these very woods and this field, to the pond. It is one of the oldest scenes stamped on my memory. And now to-night my flute has waked the echoes over that very water. The pines still stand here older than I; or, if some have fallen, I have cooked my supper with their stumps, and a new growth is rising all around, preparing another aspect for new infant eyes. (Ibid., pp. 140-141)²⁸

Although this early childhood memory occupies only a few lines in a text of more than three-hundred densely set pages, it is important because it charges the shores of the pond with biographical memory, tying the personal narrative intimately to the natural world. Earlier on, Thoreau explicitly links childhood with origins, declaring that "[e]very child begins the world again, to some extent, and loves to stay out of doors, even in wet and cold." (Ibid., p. 27) Close ties with nature, according to this reasoning, are a natural feature of human existence from which we gradually depart. According to Helena Feder this gradual detachment is a typical plot element of the

²⁸ Thoreau often deliberately splits such words as 'anybody', 'tonight' or 'tomorrow'. This happens to the effect that the individual elements that feature in compound words are highlighted and their meaning is stressed.

traditional *Bildungsroman*. In her study *Biology and the Bildungsroman* she draws a connection between growing up and the biblical story of expulsion from Paradise:

Eden is, for the West, the original origin story. For the Bildungsroman [...] it is also the Ur-plot of human 'development', the expulsion from childhood into adulthood, from nature into culture. It is, in this way, also the framework for the humanist origin story of culture – of its creation of itself from the soil of nature. Explicitly, the genre of the Bildungsroman is the story of the individual coming into culture ('coming of age') but, as I have argued in this book, it is fundamentally culture's coming out of and apart from nature [...] (Feder, 2014, p. 151).

Thoreau's decision to revisit a childhood-related site in the forest, consequently, can be understood as a symbolic act of unravelling the pattern of division promoted by the classic *Bildungsroman*. By returning to this location, a possibility emerges to reverse the structure of division, to bridge the gap between nature and culture by re-treating from the commitments of adult life. Instead of accepting expulsion, he strives to re-unify mankind and nature. This happens in dialogue with the prevalent "Recovery of Eden" (1989, p. 2) story template – to draw once more on Merchant's concept. In this context a passage from the following chapter, *The Ponds*, is of interest. Thoreau's narrator ponders on the long history of Walden Pond:

Successive nations perchance have drank at, admired, and fathomed it, and passed away, and still its water is green and pellucid as ever. Not an intermitting spring! Perhaps on that spring morning when Adam and Eve were driven out of Eden Walden Pond was already in existence [...] (2008, p. 162).

By accelerating and reversing time, the narrator looks back at the beginnings of the division between humankind and nature as he recalls the expulsion from Paradise. His speculation about the existence of Walden Pond during the Fall links it to questions of origin. It also suggests to a degree that by living on the shores of the pond, Thoreau's essayistic subject returns to a former Edenic site. Through language, he charges it with religious meaning. Still, he arrives late. Expulsion has already taken place a long time ago. The text, however, refuses to accept this division. At least in the imagination it remains possible to rewind time. In an almost psychedelic sequence from *Where I Lived, and What I Lived For*, the narrator plays with the idea of going back to a child-like state of unawareness:

Time is but the stream I go a-fishing in. I drink at it; [...] fish in the sky, whose bottom is pebbly with stars. I cannot count one. I know not the first letter of the alphabet. I have always been regretting that I was not as wise as the day I was born. The intellect is a cleaver; it discerns and rifts its way into the secret of things. (Ibid., p. 90)

Adopting a style that comes close to poetry's density of metaphors and images, this passage complicates the relationship between spirit and matter by treating time as a liquid substance capable of driving a human being back to a state of oblivion. It is a

vision of redemption, presented in terms of a fast forward process of unlearning. Wisdom lies not in adulthood, but in childhood and in order to return to this pre-intellectual state of unspoiled perception, humans need to forget knowledge previously obtained. Perhaps due to its liquid quality, its transparency, and firmness, water lends itself to descriptions that render the abstract more concrete. It embodies an element that fosters processes of renewal and ties in with discourses of origins. While Thoreau has grown up and former visitors have taken turns, Walden's water remains seemingly unchanged as it both outlasts and transcends the human life span. As a source of life, water is intimately connected with practices of spiritual renaissance, like baptism. In literary imaginations the immersion of human beings into water often symbolises the return to a pre-modern state of being one with nature's elements.²⁹ The practice of bathing or swimming translates the recovery of an original unity with the natural world into a physical act as the human body is immersed completely in water. In keeping with this literary tradition, Thoreau's depiction of spiritual transformation highlights his habit of beginning each day with a bath in Walden Pond:

I got up early and bathed in the pond; that was a religious exercise, and one of the best things which I did. They say that characters were engraven on the bathing tub of king Tching-thang to this effect: 'Renew thyself completely each day; do it again, and again, and forever again.' (Ibid., p. 81)

Physical exercise can serve a spiritual purpose. Humans search for spiritual enlightenment by moving their bodies. People set off on spiritual pilgrimages or take ritual baths. Swimming is one of the physical modes of exercise through which – as spiritual thinking goes – it becomes possible to realise the ideal of a state of peacefulness. Otherwise, a human body would simply get wet and exhausted, no metaphysical purpose attached. Bathing in *Walden* is framed as such a spiritual immersion experience. Through an achievement of the human mind and the imagination, the physical experience is turned into a metaphysical moment of reunion with the natural elements. Through repetition this habit acquires the status of a symbolic ritual that is reminiscent of baptism.³⁰ But instead of alluding to its Christian connotations only, Thoreau

²⁹ A concise outline of the most important literary traditions of depicting water – from symbol for poetry to incarnation of a non-alienated mode of living, suppressed psychological instincts, and religious renewal – can be found in Goodbody, 2008, pp. 12-14.

³⁰ On the Christian connotation of the pond see Lyon, 1967. Robert D. Richardson, in contrast, sees the ritual bath not in the tradition of baptism because it is "an awakening to daily renewal, *not* to eternal redemption." (1986, p. 174).

explicitly associates his bathing with Chinese philosophy.³¹ The intertextual reference to the first chapter of *The Great Learning*, one of the four books on which Confucianism is grounded (see Fender, 2008b, p. 331), is meant to foster the return to a pristine state of mind in nature. Bathing illustrates the degree to which Thoreau's essayistic speaker loses himself in the experience of the natural world. Yet by quoting not more than a brief extract from this book Thoreau disregards its original context, as Lyman V. Cady points out: "Man for Confucius and his school is society-centered: for Thoreau man is nature-centered" and *Walden* seeks to unravel the "societal bonds and conventions within which Confucius' morally mature and self-disciplined 'superior man' is to function." (1961, p. 31) Thoreau's desire for non-American nature mysticism, also represented in references to Native American and Indian culture, is so strong that it disregards possible interferences between *Walden's* lessons and the actual Confucian doctrine. Such juxtapositions are sources of friction which reveal the gap between reality and Thoreau's desire for a utopian good life. But let me return to the use of water images.

Even when glimpsed briefly from the railway line that connects Boston and Concord the "serenity and purity" (Thoreau, 2008, p. 175) of the water of Walden Pond affect the train's passengers and the pond "helps to wash out State-street and the engine's soot" (ibid.). Referring to Boston's financial district, Thoreau exposes the need to get rid of economy-related pollution as the process of cleansing becomes a metaphor for a spiritual event, a cleansing of the human soul. The purity of Walden's water is often described in terms of colour and light imagery, for instance when compared to White Pond. Thoreau states that both "are great crystals on the surface of the earth. Lakes of Light" (ibid., p. 180); at another point he suggests that the "water is of such crystalline purity that the body of the bather appears of an alabaster whiteness" (ibid., p. 161). He even calls it "a mirror in which all impurity presented to it sinks, swept and dusted by the sun's hazy brush" (ibid., p. 170). Water is charged with a peculiar spiritual radiance. It represents an all-pervasive elementary force capable of inspiring spiritual renewal. In a famous scene from *The Ponds* Thoreau's narrator is paddling on the pond when contact with water triggers an intense nature experience:

I was surprised to find myself surrounded by myriads of small perch, about five inches long, of a rich bronze color in the green water, sporting there and con-

³¹ Thoreau started reading Buddhist treatises and Chinese philosophy when housesitting for Ralph Waldo Emerson (see Cady, 1961).

stantly rising to the surface and dimpling it, sometimes leaving bubbles on it. In such transparent and seemingly bottomless water, reflecting the clouds, I seemed to be floating through the air as in a balloon, and their swimming impressed me as a kind of flight or hovering, as if they were a compact flock of birds passing just beneath my level on the right or left, their fins, like sails, set all around them. (Ibid., p. 171)

In a dreamlike, epiphanic vision, Thoreau describes perch as airborne animals and includes himself in their skyward motion. Reversing the location of the surrounding elements, water and air, Thoreau illustrates how the experience of floating on Walden Pond literally elevates him into a different state of mind. In the balloon, Thoreau finds an image that captures the enhancement of spirits. Echoing Rousseau's rêveries on a boat in the middle of Lake Bienne as discussed in Chapter 1, Thoreau contemplates: "I have spent many an hour, when I was younger, floating over its surface as the zephyr willed, having paddled my boat to the middle, and lying on my back across the seats, in a summer forenoon, dreaming awake" (ibid., p. 173). The ostentatious idleness on the water is the precondition for the freely floating mode of essayistic thinking that ties in with Rousseau's dreamlike thought patterns of the "rêverie" (cf. Garber, 1977, pp. 161-162; Kuhn, 2009, p. 144). In the circumscribed locality of Walden Pond, Thoreau creates an experimental textual space that is not remote, but presented as being relatively cut-off from the day to day business of Concord life. It is a place where utopian dreaming of a different social order becomes possible and where civilization can "discover and somehow preserve itself" (Snider, 1997, p. 593) by being transformed.

While proceeding through the text readers may find that the outbound mode of description gradually supersedes the mode of self-focussed essayistic contemplation that dominates in *Economy*. When considering the enactment of transformation in *Walden* as a whole, the chapter *The Ponds* assumes a significant function. As a turning point it is placed in the middle of the book, constituting a moment where the text becomes more "extrospective, more outward looking, than anything that precedes it" (Buell, 1995, p. 248). We catch the essayistic speaker intensely responding to the natural stimuli around him. Discursive passages have declined in frequency and are replaced with nature descriptions. *Walden* performs transformation as a shift towards environmental details, echoed in the changing form and style of the essay cycle. Although the personal essay is grounded in its focus on the thought patterns of the human subject, this perception can become most outbound when recreating the emergence of environmental awareness.

In *The Ponds*, Thoreau's narrator introduces a new chronological order: whereas the first chapters are organized in topical pairs, the second half follows a seasonal cycle from late summer to early spring (see Buell, 1996, p. 942). In keeping with the reversed pattern of the green *Bildungsroman* the ending happens as a return to the beginning of spring. At this point the text has completed the staging of the process of inner renewal. The arrival of spring, the season where a landscape's aspect is transformed most visibly, is both an empirical fact and symbolic in that spring awakening parallels the spiritual rebirth Thoreau's subject speaker has been undergoing during his stay at Walden Pond.

The question remains, however, whether a literary text like *Walden* can serve as an actual instruction on how to lead a more eco-friendly life (cf. Cavell, 1992, pp. 110-111). *Walden* itself raises this question by presenting itself as a spiritual manual grounded in 'down-to-earth' instructions and practical advice. This creates the illusion that the material conditions for the metaphysical telos of a life in harmony with the environment can be established by building an imaginary pathway from real life to utopia and enlightenment without geographical or temporal gaps. But ecocritics like Patrick D. Murphy (see 2009, p. 19) have challenged the belief in *Walden's* political impact, arguing that it does not provide a practical overarching model for society at large. Particularly in the twenty-first century, it is no longer possible to copy Thoreau's transformation experience and it remains doubtful whether it ever was possible in the way Thoreau describes it.

I have already pointed out in Chapter 2.2 on aesthetics of measuring and mapping that Thoreau condensed and recast some major elements of his account, such as the time-line and the levels of interaction with his family and friends in Concord. He also overstates his ability to maintain himself, claiming that "by working about six weeks in a year, I could meet all the expenses of living." (Thoreau, 2008, p. 63). Stephen Fender points out that the real Thoreau, as distinct from his essayistic I, ate regularly at other people's houses and "did not really 'live' at Walden – more like camp out" (2008a, p. xxiii). He was, in other words, not as independent as the textual self that represents his experience suggests. Despite the fact that his nature descriptions are empirical, the pond and forest are also highly imaginary in that they are presented as being more habitable than they actually were. In *House-Warming*, for instance, Thoreau's narrator first describes his peaceful co-existence with wasps, which "came by the thousands to my lodge in October, as to winter quarters" (2008,

p. 216), before he casually mentions that he himself "went into winter quarters in November" (ibid.). In the following winter chapters, however, he makes it sound as if he had spent winter at the pond, omitting thus his return to the city during the harshest weeks. Such contradictions reveal the tensions between the linguistic creation of a benevolent natural sphere in which a utopian life is possible and the severe conditions in a natural world that can be hostile to human life. Although Thoreau tries to step outside society, he remains dependent on its benefits – from Emerson's axe to rice, clothing, and his mother's house. And yet it must be taken into consideration that Thoreau produces this partly whitewashed world in order to challenge conventional assumptions about the good life. His essayistic subject is not necessarily congruent with his real self, although a rhetoric of honesty suggests otherwise, and it makes more sense to read *Walden* as a powerful inspirational piece than as a coherent lifestyle model (cf. Murphy, 2009, p. 19).

When critics like Ira Brooker challenge Thoreau's *Walden* project as an expression "of superiority and self-centeredness that works against the image of the single-minded nature lover" (2004, p. 139), they disregard the genre tradition in which the text operates. In keeping with the epistemologies of the personal essay, Thoreau uses his immersion experiences as an example. His own experiment serves as proof that change is possible. *Walden's* rhetorics demonstrate that the text seeks to inspire fellow human beings, engaging the reader in an intense, at times instructive dialogue. The narration frequently oscillates between the singular and the collective voice of a whole community, while manual style passages explicitly address a public readership and display the fundamental requisites of Thoreau's transformation experience. This constitutes the text's ecotopian streak.

Jan Hollm defines ecotopia as a counter model to the industrial culture, stressing that "ecotopia attempts to re-define the human stance within creation." (1998, pp. 10-11. The English translation is my own) *Walden* promotes such an idealized form of coexistence between human and nonhuman beings by fostering the "harmonious embeddedness of (human) society in ecological cycles" (ibid., p. 10). Like utopia, ecotopia is, however, a place that cannot be. It does not exist in reality, but in the imagination. Despite the essay's status as non-fiction, *Walden* in this sense is akin to works of fiction. But it still matters to acknowledge the role of the essay genre's aesthetics as a tool that allows Thoreau to textually stage a transformation experience that ponders the vision of a better life while seeking to challenge conventional pat-

terns of thought. Adopting the essay genre's blend of universalizing thoughts, descriptions, and specific experiences, *Walden* asks its readers to go out and make an attempt at an alternative life, and to put up resistance to visions of progress that manipulate us to become particles in a machinery of capitalist consumption, whether we live in a cabin in the woods or elsewhere. The essay, a literary experiment in itself, recreates the individual steps of Thoreau's transformation experience while contemplating the process. In doing so it connects the particular with the general, the imaginary with the real (cf. Guest, 2014, p. 72), making a case for social change while locating the roots of change in the mind of each human individual.

Andreas Maier and Christine Büchner, *Bullau. Versuch über Natur*

Thoreau wrote *Walden* relatively early on in his career. And while his later essays are, generally, considered to be more environmentally knowledgeable, it documents the beginnings of his naturalist interest. *Bullau. Versuch über Natur* is similar in this respect. The contemporary German writer Andreas Maier and his wife Christine Büchner, now a professor of theology, also use the form of the personal essay – until the eighteenth century, the volume's subtitle 'Versuch' (attempt) used to be the German translation for the English or French word 'essay' (cf. Schlaffer, 1997, p. 522) – to record their collective discovery of natural history, or 'Naturkunde' as it is in German. *Bullau* is a confessional report that documents the process of collective learning and the arising awareness of species diversity experienced by the two authors.

In the first chapter, *Veronica officinalis*, Büchner and Maier claim to be no exception to the rule that at the beginning of the twenty-first century only few people have deep naturalist insight at their command, particularly in urban environments: "Wir selbst haben vieles erst spät begriffen. Es ging langsam." / "We, ourselves, have understood a lot of things only lately. It happened slowly." (Maier/Büchner 2008, p. 8. All translations from *Bullau* are my own) By going back and forth in time, *Bullau* depicts an environmental education story that involves a similar conversion experience as *Walden*. In comparison to Thoreau's it may be a minor work of nature writing, yet one that stands out in a contemporary German context. *Bullau* resembles *Walden* in its insistence that in nature lies a counterworld to the purpose-guided lives of their contemporaries, "die fahren, wollen, kaufen, handeln, zielstrebig sind" / "who

drive, want, buy, act, and are full of purpose" (ibid., p. 27). Maier and Büchner's shared immersion in the world of local bird and plant species can at times seem like a journey into the past. This is how they frame it: by engaging with the often untimely seeming world of natural history guides, the writers embark on a quest for an old way of dwelling that is attached to these knowledge systems and that has since long ceased to exist, but can be brought back in writing. What could seem like conservative retrogressivity, is however balanced by the text's humorous side. Even though *Bullau* is characterised by nostalgic desire, it avoids opposing nature and culture by splitting the two concepts in a binary scheme. Instead of adopting a simple nature-culture dualism, the narrators rather acknowledge elements in nature that disgust them, such as the stink caused by blooming pear trees or wild garlic, or the rapid growth of mushrooms, and elements in culture they find beautiful, like the ski run in Maier's hometown Bad Nauheim (cf. ibid., p. 26). Susanne Scharnowski (2012), therefore, describes *Bullau* in terms of an "aesthetics of affected nature" that bears traces of human influence, as it refrains from idealizing wildness.

In seven chapters and on just over 120 sparsely lettered pages, *Bullau* recounts several autobiographical occasions of nature exploration and learning that represents also their personal "Sehnsucht nach etwas, wie es sein sollte, aber nicht ist" / "yearning for something that should be, but that is not that way" (2008, p. 25). *Bullau*'s nature contemplations are constantly framed in terms of this longing. They are embedded and triggered by recollections of rambles in the Hessian Odenwald, along the river Eisack near Brixen in South Tyrol, in suburban nature near Bad Nauheim, and in Cologne. Whereas Thoreau's narrator, and even more so Jamie's in *Peregrines, Ospreys, Cranes*, point to the difficulty of embedding nature observation in a tightly clocked working day, Maier and Büchner's collective we-narrator seems to know no such constraints.³² *Bullau* stresses purposelessness as an ideal that draws them to birds and plants (see Scharnowski, 2014, p. 17). The digressive form of the essay mediates a sense of following a meandering path through nature. In keeping with the essayistic tradition, *Bullau* pursues a freely drifting, experience-centred mode of contemplation:

³² It should, however, be stressed that the locations mentioned throughout *Bullau* often indicate a working context. They are significant for Maier and Büchner as individuals – Schreyahn in the Wendland region, for instance, is a well-known destination among writers due to its artist in residence programmes (Maier was a recipient of this programme, although he does not mention this in *Bullau*), Maier's second novel *Klausen* (2002) is set in South Tyrol and his yet unfinished novel cycle *Ortsumgebung* (*Bypass*), celebrated for reviving the genre of the German 'Heimatroman', discusses the changing community life in the Hessian Wetterau – but in *Bullau* they only provide a starting point for further reflections on wide ranging topics concerned with nature.

[W]ir sind keine Philosophen. Wir denken diffus, es ist nicht einmal ein Denken, sondern eine Mischung aus Denken und Fühlen und bloßen Geschmacksurteilen, die möglicherweise keine Grundlage haben und sich wahrscheinlich sogar selbst widersprechen.

we are not philosophers. We think hazily, it is not even a mode of thinking, but rather a mixture of thinking and feeling and nothing but judgements of taste, which probably have got no basis and might even be contradictory in themselves. (Maier/Büchner, 2008, p. 27)

Rather than telling a linear story, the narrators plot a transformation narrative. More so than in *Walden* transition towards an ecological awareness is staged as an event that takes place at a particular moment in time. *Bullau* features a strong before and after template. Before they had started to develop an interest in nature, the narrators note, both tended to ignore plants. But suddenly everything changed:

Wir liefen ja durch die Straßen, durch Straßen aus der Gründerzeit in Friedberg in der Wetterau, und sahen keine Autos, obgleich sie auch damals überall standen. Wir sahen sie nicht. Wie wir den Ehrenpreis nie gesehen haben, weil wir ihn nicht kannten. Die Autos kannten wir, aber wir sahen sie nicht. Sie waren uns natürlich, im Sinne von selbstverständlich. Auch die Flugzeuge. Aber irgendwann sahen wir plötzlich alles, was da war. Zum ersten Mal, und danach war nichts mehr wie vorher, wie immer nach dem ersten Mal.

We walked, as you know, through the streets, through streets that were built in the Gründerzeit – featuring late nineteenth-century architecture – in Friedberg in the Wetterau, and did not see cars, despite their being everywhere. We did not see them. In a similar manner we had never seen the speedwell because we did not know it. We knew cars, but we did not see them. They were natural to us, in the sense of taken for granted. Likewise airplanes. But at some point we suddenly saw everything that existed. For the first time, and after that nothing was as it used to be, like always after the first time. (Ibid., pp. 62-63)

The experience of an emerging awareness is described in terms of a semi-religious conversion. They portray this experience as a moment of revelation from which they cannot return. The moment of awareness that initiates transformation is modelled on the suddenness of epiphanic revelation. After realizing that they had formerly been cut off from nature, expulsion is mourned and they strive to re-establish unity. Knowledge and awareness are important factors in this context. It is no coincidence that artefacts which are especially harmful to the environment, cars and airplanes above all, are mentioned in a passage that depicts an arising environmental alertness. Knowledge is identified as the necessary precondition for a sustainable approach to the natural world because without being aware of plants like the speedwell we cannot develop a wish to protect, let alone to recognize them. But through learning about botany our knowledge of the floral world expands and we can no longer ignore the speedwell but have to see it in its context and as we know: awareness increases tolerance.

In order to improve their ability to perceive the surrounding world more intensely, the narrators have to learn from scratch to classify even the most common urban plants, birds and trees, as not-knowing is a leitmotif in *Bullau*. Whereas their parents and, even more so, grandparents could still rely on knowledge derived from first-hand experiences in their own garden or field (cf. *ibid.*, p. 79), the younger generation has grown up during a perceived period of increased detachment from the natural world. This is how they fashion themselves – made ignorant by a cultural climate of prosperity in which natural resources are exploited, while deep knowledge of the nonhuman world has been lost.

Whereas *Walden* implements the patterns of the green *Bildungsroman* by staging a return to origins as it performs a circular motion back to the oblivion of beginnings, *Bullau* presents itself as a more straightforward before and after narrative. Childhood – at least when remembered in a specific situation, not as an abstract concept – is not romanticised to the same extent as a state of purity and alertness. The opposite is, in fact, the case. As children they preferred Granny Smith apples in their "lilafarbenen Styroporschalen, je geschmackloser, desto besser" / "purple-coloured Styrofoam packaging, the more insipid the better" (*ibid.*, p. 80), rejecting the less appealing home-grown apples with their brown specks and wormy parts because the shiny green ones looked so much nicer. This anecdote from the chapter *Der Nutzgarten* (*The Kitchen Garden*), whether deliberately or coincidentally, evokes as an intertext Joni Mitchell's eco-aware song *Big Yellow Taxi* in which "they paved paradise to put up a parking lot", prompting the lyrical voice to exclaim "Don't it always seem to go that you don't know what you've got 'til it's gone" and to ultimately demand: "Give me spots on my apples / But leave me the birds and the bees" (1969). Maier und Büchner thus address the question of how to engage with a natural world that we often find disgusting when the artifice appears much cleaner and more beautiful. *Bullau's* answer is: through knowledge and imagination. Their younger selves, they explain, had no relation to the more naturally grown varieties of fruit because they did not understand the environmental damage done by the use of pesticides and genetically engineered food. And even among adults, ignorance is one of the major symptoms of the contemporary estrangement from nature they observe:

Amsel, Spatz, Taube sind die Vögel, die irgendwie alle kennen, auch wenn manche, wie gesehen, alles von Kohlmeise bis Kleiber oder auch Mönchsgrasmücke unter Spatz subsumieren, denn es sind ja erkennbar weder Amseln (,schwarz') noch Tauben (,überall, fett und ekelig) [...].

blackbird, sparrow, and pigeon are the birds everyone somehow knows, although some people, as seen, subsume everything from great tit to nuthatch or blackcap under sparrow because they are patently neither blackbirds ('black') nor pigeons ('in all places, fat, and disgusting') [...] (2008, p. 11).

Starting from the assumption that most people are not capable of distinguishing between more than three types of birds, their writing gradually expands this number, thereby staging and exhibiting the enhancement of perception. In the second chapter, *Das Blumenbuch* (*The Book of Flowers*), they claim: "Eigentlich begann das Jahr für uns immer mit Ostern" / "the year actually started for us around Easter" (ibid., p. 37). Employing a central Christian motif of spiritual renewal, they hint both at the celebration of resurrection and the advent of a new seasonal cycle. Spring awakening is both a seasonal fact and a metaphor that hints at the increasing awareness the narrators experience. In their eponymous notebook they record the plants encountered during a spring walk. It features long enumerations of flowers that evoke the sheer number of species:

Weißer und helllila Krokusse, Buschwindröschen, Frühlingsfingerkraut, eine Dolde gelber Hornklee, eine Wiesenwitwenblume, vereinzelte Büsche roter Lichtnelke in grüner Fettwiese mit Löwenzahn in Massen, ein fast geöffnetes Köpfchen Rotklee, Miere, Vergißmeinnicht, ganz kleine Butterblumen, Immergrün, Waldgelbsterne, hohler Lerchensporn (violett und weißlich), kriechender Günsel, Gundermann, Waldveilchen und Viola odorata, Hirtentäschel, Huflattich, Gänseblümchen und Ehrenpreis, Erika, eine Nelke, also schon fast alle Frühlingsblumen!

White and bright lilac crocus, wood anemones, spring cinque-foil, an umble of bird's foot trefoil, a field scabiosa, scattered bushes of red campion in a green fertile meadow with dandelions en masse, an almost opened head of red clover, sandwort, forget-me-not, tiny tiny buttercups, evergreen, yellow star-of-Bethlehems, hollowroot (purple and whitish), bugle, gill-over-ground ivy, wood violet, and viola odorata, shepherd's purse, coltsfoot, daisies and speedwell, erica, one pink, so already almost all spring flowers! (Ibid., pp. 37-38)

By using the common plant names, instead of Linnaean taxonomy, they distinguish their approach from that of science. This passage celebrates the beauty of plant names by giving it room to unfold its rhythm and sound without incorporating it into a specific contemplation or story arch. The aesthetic feature of the list brings to mind the encyclopaedic-scientific aesthetics of collecting as discussed in Chapter 2.1. But in addition, it illustrates the increased awareness of the richness of natural life, reflected in the motif of spring awakening that is evoked, once more, in the last sentence's exclamation.

Büchner and Maier explicitly emphasise individual steps of their learning process that forms part of the spiritual transformation the essay cycle documents. Looking back at the beginnings of their interest in nature they remember how they first em-

barked on natural history owing to a record exchange. A friend's brother traded *Vogelstimmen. Singvögel unserer Heimat*, a record of songbird's voices, for a *Star Wars* soundtrack. At first they were surprised to listen to an LP which refers to the German homeland: "Komisch war, etwas in den Händen zu halten, das von 'unserer Heimat' sprach" / "It was strange to hold something in one's hands that spoke of 'our homeland'" (ibid., p. 13). In comparison to American and new British nature writing, where national landscapes provide a common frame for national identification – though the British Empire is sometimes presented as a similar flaw (cf. Esty, 2004) – post-World War II German nature writing is not innocent in matters relating to nature (see Schröder, 2015). The term 'Heimat' was abused by the Nazis as they incorporated the concept into their *Blood and Soil* ideology. In the German natural history tradition, traces of national socialist ideology are omnipresent. When *Bullau's* narrators look at a nature guidebook shortly thereafter they comment "Heimat und Führer!" (2008, p. 20) because the word 'Kosmos-Naturführer' includes 'the Führer' and 'Führer' in German can mean both 'leader' and 'guide'. At another point, the word 'biosphere' reminds them of the term *Lebensraum*: "Biosphäre, das heißt ja auch nur Lebensraum und ist auf deutsch [sic] ein Hitlerwort." / "biosphere, means nothing else than Lebensraum and is in German a Hitler-word." (Ibid., p. 36)³³ In such meta-reflections and hints at political history, German nature writing reflects the tensions between the intimate bonds with nature promoted in other nature writing traditions and memories of Nazi ideology (cf. Scharnowski, 2014, p. 19). The rebaptism in *Bullau*, in this context, can also be read as an attempt to cleanse the German tradition while acknowledging ideological undercurrents of nature discourses.

While the drive to get back to the superior state of awareness of the generation of their grandparents is complicated by the ideological appropriation of nature discourse by the Nazis, the narrators identify previously acquired knowledge as an additional obstacle. Like *Walden*, and in keeping with the template of the reversed *Bildungsroman*, the narrators stress the need to unlearn accepted wisdoms in order to re-animate the ability to simply perceive the world without wanting to improve it. In the current German education system they see a major source of their own detachment from nature:

³³ Maier and Büchner hint at the fact that the term 'Lebensraum' originally referred to a habitat or biosphere. In the twentieth century the Nazis adopted the term for their politics of expansion. Due to their assumed ethnic superiority, Aryan races, according to fascist ideology, were supposed to gain more 'Lebensraum' than other races. The expansion of German territory was partly declared a necessary means to gain more German 'Lebensraum', which is why the term is not used in biology or ecology anymore.

Die ‚Objekte‘ werden zerlegt und untersucht, bis sie nicht mehr vorhanden sind, so hat einem der Biologieunterricht die Ehrfurcht vor dem Leben ausgetrieben.

‘Objects’ are dissected and examined, until they no longer exist, this is how biology classes have exorcised our awe in the face of life. (Maier/Büchner, 2008, p. 78)

Scientific methodology is described here, in keeping with Max Weber’s disenchantment hypothesis, as a destructive force that splits objects into ever smaller units. We have seen a similar critique of this particular strand of science before, in *Subtile Jagden*. Ernst Jünger’s lament of the outdatedness of the affectionate natural history tradition, almost fifty years earlier, reverberates in *Bullau*’s longing for alternative modes of knowing. Missing in biology classes is the spiritual dimension of nature, its secrets. Although biology trains students in how to analyse the function of natural objects, the inner essence of life may escape it. But this is exactly what interests the essayistic subjects, which is why they turn away from modern science.

In spirit, their concept of nature is more akin to the mysticism of the German medieval theologian Meister Eckhart, or literary Romanticism (cf., *ibid.*, p. 82, 78). The innovation of *Bullau* lies in its productive adaptation of Romantic and mystical transcendence. The narrators contemplate their forerunners in spirit discursively and relocate their ideas in a contemporary setting by framing their experiences of urban environments through these metaphysical traditions. Such a moment is depicted in the chapter *Odenwald* where Büchner and Maier remember a snowy winter evening in the 1990s. They were taking the tramline from Frankfurt’s district Ginnheim into the city when the tram suddenly stopped:

und alle stiegen aus und standen auf der Straße, als sei es das erste Mal, als seien sie gerade geboren worden, so standen sie herum und staunten im Schnee.

and everyone got off and stood on the street, as if it were the first time, as if they had just been born, that is how they stood there in amazement in the middle of the snow. (*Ibid.*, pp. 70-71)

The power of snow lies in its ability to pause all traffic. By interrupting the usual proceedings, it evokes a superior world in which people are suddenly fully attentive and conscious of their existence without being driven to consume and to rush through the world. It is a world Maier’s and Büchner’s grandparents were still familiar with, a world with almost no cars and large stretches of seemingly untouched landscapes, a world in which people walked to work. *Bullau* is driven by a strong longing for this lost world. In *Bullau*, metaphysical-spiritual epistemologies reside in this nostalgic space. Something is imagined that lies in the past: an Edenic physical state of the world (without cars and motorways) that cannot be brought back, yet one that they

can recreate in their thoughts. Traces of this old world are still preserved in the culture of German country inns, which the authors associate with Edgar Reitz' *Heimat* film series (1984-2013, see *ibid.*, p. 54): "Nichts wird sich dort ändern bis zum Tod aller Beteiligten." / "nothing will change until the death of all persons involved" (*ibid.*, p. 68).

Maier and Büchner's narrators repeatedly mention the fate of being late, of coming after something is already gone. Snow creates the illusion of a life without cars. At least for a couple of hours it turns back the clock and gives the narrators an idea of what life used to be like in pre-war Germany. In line with the structure of a reversed education narrative, the increased perception they experience in Ginnheim is depicted as a return to origins. The motif of birth illustrates the unconditioned way of perceiving that occurs in this moment. But this scene describes only a temporary, epiphanic elevation from everyday life; usually people "haben ein Ziel, und deshalb fahren sie, als sei das natürlich." / "have a destination and therefore they travel in a vehicle, as if this were natural." (*Ibid.*, p. 73) *Bullau's* natural history explorations offer resistance to this purpose-based way of moving through the world, by trying to expand and re-learn the mode of passive observation they experienced in snowy Frankfurt-Ginnheim.

This mode constitutes an ideal state of mind associated with the world as their ancestors had known it. Instead of imposing themselves on the world they postulate an almost spiritual attitude of deep humbleness. They claim, for instance, that one has to wait "bis die Dinge sich zeigen. Man kann es nicht wollen. Wollen hilft nichts." / "until the things reveal themselves. It is not possible to want this. Wanting does not help." (*Ibid.*, pp. 40-41) According to the narrators, literature and religion can promote such an alternative take on nature. In the poems of the baroque poet Barthold Heinrich Brockes, for instance, they find an attitude of passive awe, an observing point of view that marvels at the splendour of animals and plants, such as the blooming cherry tree at night in one of Brockes' best-known poems, without attempting to improve or change creation: "Es läßt sie [die Welt] sein, eben mit betrachtendem Gemüte". / "It lets it [the world] be, just by contemplating it" (*ibid.*, p. 49).

Although their writing is determined by an ironic tone and a certain playfulness concerning the out-datedness of natural history, Maier and Büchner are also deeply serious about the need for environmentalism in a world narrowed by its functional purposes. *Bullau* may not develop an explicit ecological agenda, as Scharnowski

points out (see 2014, p. 11), and it stops short of instructing readers as Thoreau does. Nevertheless, their humble take on the environment bears traits of an implicit appeal for attributing nature its own right to exist apart from humans' will to dispose of it. Literature, in particular, represents an approach to the nonhuman world which, due to its poetic language, is capable of doing justice to nature's forms. But apart from this, Maier and Büchner also hint at an environmentalist literary and spiritual tradition in Germany that represents a counter-discourse to the social norm. In the realist nineteenth-century novelist Wilhelm Raabe, for example, they discover an early conservationist who depicted the disastrous outcome of a merely purpose-oriented approach to nature in his novella *Pfisters Mühle*. Raabe's tale is a fictional account of a river contaminated by effluent from a sugar beet factory: the "Chemohöllenfabrik" / "chemo-hell-fabric" (2008, p. 34). Yet, *Bullau* is no rant against other people's ignorance, mistakes or neglect in dealing with a non-sustainable use of resources. The authors know that when you point your finger at someone you have three more fingers pointing back at yourself:

Denn täuschen wir uns nicht: Wir schalten zu Hause das Licht an, wir, als sei das natürlich, und kaufen dadurch Strom und produzieren einen Stoff [Plutonium], den sie noch in hundertzwanzigtausend Jahren von der Welt [...] technisch abschließen wollen, weil sie es müssen.

Let's make no mistake: since we turn on the lights, we, as if this were natural, and in doing so we buy electricity, and produce a substance [plutonium], which they will still want to technically cut off from the world in hundred-twenty-thousand years, because they have to. (Ibid., p. 36)

They single out everyday acts, such as our dependency on electricity, rather than addressing abstract concepts like climate change. This allows for a better understanding of what it means to live and use resources and try to protect the environment while being guilty of harming it every day. There is also a Christian dimension to this line of thought: due to original sin, humans are condemned to guilt. Only a return to Paradise would resolve this dilemma. As long as we struggle to get back to the former state of unity, to exist means to affect and in the end harm our planet. Redemption, though, seems still possible, experienced as grace, and attained through slowness and intense perception.

Both *Bullau* and *Walden* use key features of the literary essay, such as discursive contemplation and a subjective perspective, in order to make a transformation experience accessible to a larger readership. Their writing about a personal experience is inspired by the genre's communicative function. Nature essays depict and contemplate the transition of a human individual from ignorance of the nonhuman world to

an increased awareness of the environment in order to inspire other people to follow, or at least to re-consider their own stance in the world. Reversing common assumptions by giving them a rhetorical treatment that is grounded in motions of inversion and subversion helps to challenge social norms that can prove harmful to the well-being of humans and more so, beyond. While Thoreau's narrator stages his resistance to exploitative capitalist notions of nature by retreating from society, *Bullau* reveals the possibility of a different form of resistance to consumerist attitudes by referring to the old world of humble nature observation the authors discover in the tradition of 'Naturkunde'. In both texts we encounter essayistic subjects in pursuit of metaphysical nature experiences as they strive for a mind-enhancing mode of existence in the world. There is also an ethical dimension to this quest for a more aware mode of living, to be discussed in the following chapter.

4. “Animal Farm”:

The Ethical Episteme – Animal Ethics, Stories of Decay, and Writing Entangled Agencies

Ethical discourse commonly revolves around the question “how should one live?” (Blackburn, 2001, p. 1) Environmental humanities have sharpened this question by stressing the need to expand ethical considerations from the traditional realm of human-related issues to “the entire natural world” (Curry, 2011, p. 32). There is, however, not one nature ethics, but many. The German philosopher Angelika Krebs, for instance, distinguishes between anthropocentric and physiocentric ecological ethics (see 1997, pp. 342-344). Both advocate the preservation of the natural world, but their reasons for doing so set them apart. Anthropocentric ecological ethics argues that the flourishing of the human species depends essentially on the nonhuman world. We need nature not only to satisfy basic needs, but also to care for other necessities: humans profit from nature’s aesthetic splendour, our identities are grounded in local landscapes, and contact with plants and animals allows us to improve our emotional virtues, in particular, empathy. Physiocentric ethics, on the other hand, grounds its claim to the moral significance of nature in the notion that nature possesses intrinsic moral value that exists independently of human priorities. Neglecting utilitarian considerations, one strand of physiocentrists reasons that the interests of all living beings should be taken into consideration insofar as they are living sentient beings. Some physiocentrists see life as a value in itself because it forms part of God’s creation, or because sentient existence alone, in particular the ability to suffer, should command our respect for the well-being of a living thing. Others see the nonhuman world as an interconnected whole that needs to be

protected because it fulfils a purpose, or because it cannot be separated from human destiny.

As a value-centred mode of speech, ethical discourse often bears a metaphysical dimension. Ethical values can be derived from a divine order to which the essayistic subject, implicitly or explicitly, refers, and from which that subject acquires its vision of an ethically-sound life; but, in a secularised version, ethical discourse can also originate in the purpose-based telos of utilitarian ethics or the idealism of the Kantian 'categorical imperative'. In these cases it constitutes a mutual (and often mute) agreement among individuals who all want the best for themselves and acknowledge that others want the same. Ecological ethics necessitates the negotiation of values, but it can also translate into very specific instructions on how to act. In the secular context of environmental politics, agreements of coexistence usually translate into laws, featuring detailed material information, such as: hens must be fed on a natural diet, have access to the outdoors, and should only be treated with medicine when sick to qualify for organic farming. But similar laws exist as well within metaphysical discourse. Buddhists do not eat cows because they consider them holy, Muslims have banned pork, and staunch Catholics stick to fish on Friday. Such ethical principles are metaphysical, in my understanding, when the spiritual doctrine on which they are grounded refers to a higher, divine ethos. We find secular and metaphysical-spiritual ethics in nature essays, physiocentric, and anthropocentric reasoning. There is, accordingly, a multitude of ecological ethics that feeds into nature essay discourse.

While all ethics have started "as religious codes of behaviour" (Curry, 2011, p. 26), today ethical questions are often separated from their religious roots. Kate Rigby in *Dancing with Disaster* (2015) traces the tensions between secularised explanations of natural catastrophes and the metaphysical punishment paradigm through literary discourse. She points out that by the turn of the twentieth-century, calamities caused by floods, earthquakes, tornadoes, and diseases were no longer seen by most Western cultural authorities as divine interventions. A mechanistic view of matter took hold,

according to which the merely material realm of nature followed its own mechanistic principles that were entirely separate from human morality and social relations. Such calamities were now seen to have purely physical causes; formerly referred to by philosophers and theologians as *natural evils*, by the turn of the twentieth century they had become fully secularized and rationalized as *natural disasters*. (Ibid., p. 3. Rigby's emphasis)

In the literary imagination, however, visions of guilt, redemption, and justice often continue to resonate with religious connotations. Ethical epistemologies are implied

in the ways in which a text constructs the natural world and looks at it. As soon as we come face to face with explicitly ethical passages in nature essays, we enter a territory demarcated by judgements of right and wrong. Powerful images of a doomed world complement and invigorate passages of ethical reasoning by adding an element that appeals to the readers' emotions. An ethical grasp of a theme can result in a multiplication of prescriptive terms, turning the speaker subject into a warner or counsellor. Frequently, ethical contemplations disrupt the descriptive flow: the text ceases to explore and begins to prescribe or warn. As a consequence the subject speaker vindicates her or his own patterns of behaviour and can turn into an apt rhetorical vehicle for enquiries into the right modes of living.

The mobility of ethical standpoints distinguishes the essay from other formulations of ethics. Essayistic attitudes may develop or change over the course of the text because the narrator is able to perform a change in perspective. Sometimes the writer even leaves us under the impression that we can follow the evolution of thought in reading. Essays allow for the expression of ethical concerns in thought-orientated passages. They bring a counter-discursive edge to ethics by "pointing out the problems with readers' current way of thinking" (Slovic, 1996, p. 85), as discussed in the previous chapter. It is helpful, in this context, to remember that in *Ecocriticism* Garrard claims with regard to ecological problems that to "describe something as an ecological problem is to make a normative claim about how we would wish things to be" (2012, p. 6). Ecological ethics frequently focus on ecological problems, like species extinction, the harmful effects of agrochemicals, or deforestation. Yet the notion of what constitutes an ecological problem is subject to change, and essays may play a significant part in framing these problems. But how do they do this?

Quite often they do not express values directly and simply. While some essays lobby their readers to adopt a habit of ecological cooperation, others pursue more subtle or refined aesthetic strategies when they try to make an ethical argument. The nature essay that most explicitly brings together physio- and anthropocentric arguments is *The Land Ethic* (1949) by the American conservationist and professional wildlife biologist Aldo Leopold. I have not discussed this essay before because it did not seem to fit into any other epistemic category. Of all the essays discussed so far, Leopold's text provides the most discursive ethical statement, as his focus is on arguments and thoughts rather than poetic expression. As distinguished from the other writers discussed so far, Leopold is the only one who has not published any work of

fiction (even Humboldt published a short allegorical story in Friedrich Schiller's magazine *Die Horen: Die Lebenskraft oder der Rhodische Genius*). He enters nature essay discourse coming from science. *The Land Ethic* first appeared in Leopold's *A Sand County Almanac*, a book reflecting on Leopold's experiences while living in a cabin on a sand county farm in rural Wisconsin. Widely regarded as a canonical work of American nature writing,¹ *The Land Ethic* is essentially a contemplative essay on the question of how to protect a "biotic community", as Leopold calls it. Extended preservation is the key concept in his essay. He argues that the "land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land." (Leopold, 1953, p. 239) Taking into account ecological (physiocentric) and aesthetic (anthropocentric) aspects, Leopold clearly specifies what he understands to be the adequate way of cohabiting, stressing that a "thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." (Ibid., p. 262) This blunt ethical statement echoes the moral framework of many nature essays, but they seldom express their ethical consideration as directly as Leopold, who comes up with a clear evaluation of what is good or bad for a land. It is remarkable how Leopold downgrades the human claim to the natural world by repositioning human interests among and not above the interest of other elements in an ecosystem. Yet, most essayists shy away from the direct mode of Leopold's open statements on ethical values, and seem to prefer indirect ways of revealing interdependencies. While Leopold speaks from the point of view of a professional ecologist who uses a literary form to engage with a broader audience, other essayists write with a different purpose.

I have already, at various points over the course of the preceding chapters, given the ethical implications of nature essay writing some consideration. While ethical epistemologies can draw on the aesthetic strategies I have earlier on associated with metaphysical-spiritual and encyclopaedic-scientific perspectives, ethical epistemologies reframe these perspectives from a moral point of view. Depictions of metaphysical awe and wonder, for instance, are used to arrive at a claim to the right mode of living, turning descriptions of epiphanic experiences into an emblem of ecological concentration, respect, and caring attentiveness to the environment. When nature

¹ Together with Thoreau, John Muir, Mary Austin and Edward Abbey, Garrard lists Aldo Leopold as a key figure of the "modern canon of American wilderness writing" (Garrard, 2012, p. 79). According to Curry, *The Land Ethic* is probably the "single most influential statement (certainly so in America) of ecocentric ethics." (2011, p. 94)

essays take a turn from the encyclopaedic-scientific to the ethical mode they convert nature inventories into a moral reflection on species extinction, while incorporating scientific facts into their line of argument.

Ecocriticism suggests that nature literature is capable of promoting different ways of cohabiting in a global environment. It adheres to the conviction that literary texts can provide answers to the question of how we should live, as these texts are equipped with the power to stress human responsibilities and reveal disproportions. The ideological streak of nature essay writing, in particular, has not escaped scholars' attention. Nature writing is generally believed to be "ecological in its sensibility, and [...] often in service to an explicit or implicit preservationist agenda" (Branch, 2001, p. 91). In its most extreme form, the discourse on the benefits of nature essay writing even bears messianic tendencies. Some critics claim that nature writing "has the ability to change us for good" (Macfarlane, 2015b), while others stress its power to effect "our redemption, both ecological and political" (Lyon, 1989, p. 5). Even if such assessments overestimate, as Timothy Clark claims (see 2015), the ability of nature literature to inspire activism and feed into policymaking, nature essays can inform their readers, alert them to environmental risks, and inspire them to see the world in new ways. They also hold available, as Rigby's study demonstrates, a set of moral values that is otherwise presently often missing in public discourses. As a pragmatic form that is not seldom published in magazines with a mass-readership (e.g. *Granta*, *Harper's*, *The New Yorker*), the essay is more likely to make a contribution to public discourses than, say, long poems or academic articles which, usually, reach only very small or expert readerships. But, regardless of whether we believe that literature about nature can make a difference, it certainly is one key element within a greater medial network that shapes the way in which we perceive our ecosystem.

This chapter seeks to organize some of these observations into a framework of the essay's ethical take on nature. It does so by revisiting some of the previously discussed essays and by considering them alongside other ethically orientated nature essays. In keeping with the structure of the preceding chapters, this one introduces three central aesthetic features of ethical nature essay writing. Animal ethics use disturbing images and related empathetic aesthetics to affect the readers emotionally; stories of decay hint at the limits of resources and the vulnerability of the nonhuman world; and the staging of entangled agencies allows the essayistic subject to imagine a nonhuman point of view. Together with the practice of challenging harmful social

conventions, as discussed in the previous chapter on transformation experiences, these strategies are central to ethical essay discourse as they build on the essay's power to query established modes of thinking and acting by blending personal anecdotes and nature descriptions with argumentative writing. Starting with animal ethics, I will now discuss these vital paradigms of ethical discourse.

Aesthetics of Empathy and Shock: The Example of Animal Ethics

The sentience of the natural world is most explicitly addressed when essayists turn to nonhuman animals. Pain and suffering of animals, paired with contemplations of ethics relating to the human treatment of animals, has been a major concern of a huge variety of essay writers at least since Montaigne in *De la cruauté* (*Essais*, II.11) reflected on the unbearable moment when a chicken's throat is being cut, or when a hare cries while being slaughtered by humans. Although Montaigne's essay concludes, mainly, with insights into the essence of human cruelty (cf. Melehy, 2006, p. 96), it is notable as a forerunner of modern nature essay discourse, in the way it re-evaluates the ethical implications of interspecies relations, making a strong case for compassion and mutual respect. In order to explore the ethical implications of human-animal relations, essayists often rely on the emotional capacities of empathy (the ability to understand and share the feelings of others) and sympathy (the process of feeling for someone else). During moments of empathy or sympathy, the distance between watcher and watched is temporarily shortened, made to seem inexistent or dissolved. In its extreme form, empathy can even translate into changes of the narrative point of view, a narrative device to which I will return.

In Virginia Woolf's *The Death of the Moth* we have seen such a drive to share the destiny of a nonhuman being. Her narrator observes the motions of an agonizing moth with sympathy as she claims that "[t]he helplessness of his attitude roused me." (2011a, p. 442) Yet, Woolf hesitates to deduce an ethical argument from this situation, because death, for her, forms part of the natural cycle of life. The essayistic speaker acknowledges it as such without interfering; although attempts to do so would be ultimately pointless anyway, there is no refusal of acceptance, no "rage against the dying of the light" (Thomas, 1995, p. 128) on her part that might result in a new assessment of nature's ways. While Woolf's essay depicts a scene that is not directly linked to the harmful human impact on animals – neither light pollution nor

insecticides are mentioned – other essayists push their readers more determinedly, and sometimes more reproachfully, towards empathy, by making us see and feel the suffering humans can cause among sentient beings.

David Foster Wallace's *Consider the Lobster* takes on a central question of animal ethics. "Is it all right to boil a sentient creature alive just for our gustatory pleasure?" (2011, p. 243), his narrator asks himself and his readers, after reporting about the large industry around the Maine Lobster Festival. While the text begins in the manner of a feature, it gradually becomes more essayistic, moving the articulation of thoughts and arguments into the foreground. As a hyperconscious postmodern writer, Wallace engages with "hard-core philosophy" (ibid., p. 246) in an attempt to answer this question. When reflecting on the lobster's ability to suffer pain he refers in a footnote to Peter Singer's *Animal Liberation* (1974), the "bible of the modern animal-rights movement" (ibid., p. 248, FN 17). Wallace quotes Singer, who compares the sentience of a mouse to that of a stone:

A stone does not have interests because it cannot suffer. Nothing that we can do to it could possibly make any difference to its welfare. A mouse, on the other hand, does have an interest in not being kicked along the road, because it will suffer if it is. (Ibid.)

Singer is making a case for animal rights, by arguing that animals feel, memorize, and anticipate pain, and their lives therefore should matter to us. While he asks us to empathize with the mouse, it would be strange to do the same with a stone. Sentience, according to Singer, determines the ethical relevance of a creature. In keeping with this argument, Wallace examines the abilities of lobsters to experience pain. Instead of imagining the lobster's feelings, as would be typical of an empathetic approach, he adopts an observing point of view that confines itself to exteriorities. *Consider the Lobster* assembles numerous facts and data on lobsters – as I have shown in Chapter 2.3 on data prose – and combines this encyclopaedic grasp of the lobster with an enquiry into the ethical side-effects of lobster consumption. Wallace does a sort of rhetorical dance around the problem, at first side-stepping the intimate depiction and appropriation of the experience of actual pain the lobster may or may not suffer from, but ultimately arriving at the conclusion that lobsters probably suffer when being cooked. He underscores this by pointing out that experiments have shown that lobsters "can detect changes of only a degree or two in water temperature; one reason for their complex migratory cycles (which can cover 100-plus miles a year) is to pursue the temperatures they like best" (2011, p. 252). When they are caught or farmed, however, and thus forced into human food production cycles they are deprived of

this freedom. Their attempts to climb out of the pot while being cooked alive can be read as the suppressed endeavour of acting out a preference. Consumers on the other hand are capable of making choices and in doing so can exercise agency, instead of being passive food tourists with no deeper ties to their environment. Wallace's narrator translates the mute sensation of pain the lobster registers into the image of atrocity-spectacles Western civilisation pretends to have moved on from when he argues "if you, the festival attendee, permit yourself to think that lobsters can suffer and would rather not, the MLF begins to take on the aspect of something like a Roman circus or medieval torture-fest." (Ibid., p. 253) By suddenly comparing lobsters in an anthropomorphising gesture to tortured humans, Wallace ignites a typically essayistic switch of perspective. This aggressive counter-description of the lobster festival fulfils an ethical function in that it reveals a different, frightening world in which the practice of cooking and eating crustaceans is anything but harmless. Through disturbing images, the text appeals to the reader, who must face the question: what if it were you? This can be part of the strategy when it comes to posing ethical dilemmas.

Shocking images, though presented as straight non-anthropomorphic descriptions, feature as well in *The Peregrine*. J.A. Baker's narrator exhibits the man-inflicted pain of birds, pointing to a "poisoned crow, gaping and helplessly floundering in the grass, bright yellow foam bubbling from its throat" (2011, p. 113). In this depiction, the adverb 'helplessly' adds an empathetic framing. Peter Singer makes use of these aesthetics himself when he describes the practice of debeaking chickens in order to prevent cannibalism. Drawing on the aesthetics of shock and trauma, he observes:

The farmer would burn away the upper beaks of the chickens so that they were unable to pick at each other's feathers. A modified soldering iron soon replaced this crude technique, and today specially designed guillotinellike devices with hot blades are the preferred instrument. (Singer, 1995, p. 101)

Where Singer stresses a "guillotinellike" design, Wallace hints at the fact that the lobster's "claws are pegged or banded to keep them from tearing one another up under the stresses of captivity" (2011, p. 242). Descriptions of their "[l]ive dismemberment" (ibid., p. 250), or, the "gruesome, convulsionlike reactions" (ibid.) of lobsters in the process of being boiled, ask for our sympathy with the lobster. This is a mechanism already implicated in the essay's title. It can be read either as an imperative to take the lobster's interests into consideration, or, more generally, to pay attention to it, instead of remaining in the comfort zone of ignorance.

But there is a difference between the conclusions Wallace and Singer draw from these descriptions. Singer weighs the human sacrifice of renouncing meat eating against the possibility of sparing nonhuman animals the experience of pain, Wallace on the other hand struggles to arrive at the same utilitarian imperative in which the well-being of the animal outweighs human interests. Despite an overwhelming abundance of information on the sensitivity of crustaceans, Wallace's essayistic subject speaker admits: "I like to eat certain kinds of animals and want to be able to keep doing it." He also states: "I haven't worked out any sort of personal ethical system in which the belief is truly defensible instead of just selfishly convenient." (Ibid., p. 253) While Singer comes up with an elaborate philosophical argument about animal rights, Wallace answers with the subjective statement of an essayist. From an ethical perspective, this admission tends strongly towards human selfishness.

Wallace's essay is as much an enquiry into the human failure to act ethically as an argument making the case for consideration of other life forms. The essay alternates between general contemplations on the right mode of behaviour and highly subjective, almost confessional, passages of guilt and egocentricity. It asks its readers: why do humans not act ethically if they have all the information needed? Wallace's narrator – echoing the ending of J.M. Coetzee's narrative essay *The Lives of Animals* – admits that "the whole animal-cruelty-and-eating issue is not just complex, it's also uncomfortable. It is, at any rate, uncomfortable for me" (ibid., p. 246). Wallace's narrator stages the sinfulness of human choices, and the disorientation brought by awareness of conflicting interests (my appetite for meat vs. the animal's preference to live). These are ethical problems we face in an age where many people prefer to know about the problematic side-effects of mass consumption only up to the point where their own well-being may be immediately at stake (e.g. contamination of industrially produced food that periodically causes media scandals). Until then a great number of people continue to eat lobster. Wallace, in general, is intrigued by ethical inconsistencies like this. He observes them from within the system as he investigates his textual self uncompromisingly. Instead of resolving this dilemma, the text exhibits and to a degree seems to be fascinated by the inescapability of consumer culture with its moral flaws. *Consider the Lobster* may lack the certainty of animal rights discourse, as it repudiates the "PETA-like screed" it deems "simplistic and self-righteous" (ibid., p. 253), but it stages, exposes, and queries animal ethics all at the same time. By deliberately exhibiting uncertainty in the process of deciding what is right or wrong,

Wallace challenges the firmness of value systems and in a way undermines the self-centred attitude his essay at other points seems to support. Addressing animal pain within an essayistic space enables it to be considered and contemplated in an attempt to re-establish ethical stability and foster a tender engagement with the material world.

But, helpful as animal ethics may be in promoting animal rights, they fail to provide a broader ethical framework that takes into account whole ecosystems. Where Singer makes us choose between the mouse and the stone, nature essayists often pick both, embedding animal-related contemplations into a wider panorama. *The Death of the Moth*, for instance, deliberately plays with the notion of ecological interconnectedness as it celebrates the power of life forces. Through an act of intense concentration, as represented in the mode of detailed description, Woolf's narrator exhibits her awareness of the invisible natural energies which not only inspire the motions of the agonizing moth, but also affect her own presence and those of "the rooks, the ploughmen, the horses, and even, it seemed, the lean bare-backed downs" (2011a, p. 442). Woolf's perspective recognizes interdependencies between a number of living and non-living entities. Such a holist take on the environment brings to mind Humboldt's globally-orientated observations – think of the spread of plant growth through flying spores he describes at the beginning of *Ideen zu einer Physiognomie der Gewächse*. Despite the fact that neither writer argues explicitly ethically, both utter an implicit ethical claim: hurting the environment, in the end, we will hurt ourselves because of strings of mutual dependencies.

Stories of Decay: The Apocalypse Template

Dependencies are also a major theme when it comes to narratives of decay. They help essayists to frame the sometimes harmful consequences of human interference in non-human spheres. Contrary to the myth of an unlimited supply of resources, stories of decay focus on the vulnerability of our ecosystem. They reveal patterns of pollution and hint at the limits of resources.² Utilizing the rhetorical device of juxtaposition, essayists typically contrast states of plenty, purity, and flourishing life with scarcity, devastation and absence. They describe processes of decay in terms of a decrease in material quantities or, stocks, or as alterations in nature inventories, while

² Together with the pastoral, wilderness, apocalypse, dwelling, animals, and futures, pollution is one of the central environmental tropes Greg Garrard defines in *Ecocriticism* (2012).

motifs and allegories of doom, emptiness and exhaustion inform the imagery that is being used. We find such patterns of decay in nature essays from all periods, starting with Rousseau's observations of the destruction of one of the islands on Lake Bienne "par les transports de la terre qu'on en ôte sans cesse" (1992, p. 109) / "because earth is constantly taken away from it" (2006, p. 63). Decay as such may not be an ethical phenomenon, but essays often frame it morally. This can be particularly well observed in descriptions of deforestation, of vanishing and destroyed forests – a theme that features in many nature essays and beyond (see Harrison, 1992). Thoreau, for instance, discusses the logging of forests for timber in *Walden's* chapter *The Ponds*. Applying a long-term gaze, his narrator concludes that since he left his cabin on the shores of Walden Pond,

the woodchoppers have still further laid them [the shores] waste, and now for many a year there will be no more rambling through the aisles of the wood, with occasional vistas through which you see the water. My Muse may be excused if she is silent henceforth. How can you expect the birds to sing when their groves are cut down? (2008, p. 173)

By tying together the artistic process with the well-being of the environment, Thoreau's narrator reveals interdependencies. Shifting back and forth in time, as is typical of stories of decay, he reveals the anthropogenic causes of an altered environment, and contemplates prospects. Thoreau's essayistic subject is not the only one who seems to be haunted by the effects of vanished forests. The essayistic contemplation of deforestation culminates in late twentieth-century German literature.

The forest is not only a prototypical ecosystem, but also a sphere of the cultural imagination that is symbolically charged. Several canonical German-language writers have expressed in nature essays their ethical concern about the vanishing of forests. The contemplation of forest decay provides fuel for both a mournful and an angry grasp of ethical misconduct. This way of registering radical changes in the plant cover of our planet has a poetic lineage that predates the late twentieth century and is traceable to Alexander von Humboldt's *Ansichten der Natur*.³ Holding the belief that the advancement of human culture often involves the decay or destruction of natural vegetation, Humboldt's narrator points to the harmful impact of early civilizations in southern Europe, where "Waldungen verdrängt [wurden] und [...] der umschaffende Geist der Nationen der Erde allmählich den Schmuck raubt" (2004, p. 243) / they

³ Andrea Wulf stresses the fact that Humboldt foresaw the impact of deforestation on the global climate, as he "began to understand deforestation in a wider context and projected his local analysis forward to warn that the agricultural techniques of his day could have devastating consequences." (2015, p. 58)

"pushed back the forests" because "the drive of nations to re-create has gradually robbed the Earth of the sylvan adornment" (2014, p. 158). In Loja, in today's Ecuador, he observes that the Spanish colonists have already felled many trees, concluding: "Die älteren und dickeren Stämme werden immer seltener" (2004, p. 438) / "The older and thicker trunks are becoming ever scarcer" (2014, p. 268). By emphasising Spanish impact, Humboldt draws a connection between environmental destruction and colonial rule.⁴ While indigenous tribes cohabited with their environment, colonists exploited it. At another point he, therefore, stresses the positive impact of the "Menschenleere" (2004, p. 27) / "the sparse presence of humanity" (2014, p. 36) on plant growth and animal life in the primeval forests along the river Orinoco, and argues that due to the absence of humanity's "zerstörende Hand" (2004, p. 217) / "destructive hand" (2014, p. 142) South American landscapes continue to be a "wilder Schauplatz des freien Thier- und Pflanzenlebens" (2004, p. 20) / "wild showplace of free animal and plant life" (2014, p. 32). While Humboldt's writing is driven by a physiocentric value system that aims for the preservation of the natural world for its own sake, many late twentieth-century essays are even more explicitly ethical. They take Humboldt's early warnings of deforestation to their full conclusion.

Since the early 1980s,⁵ the so-called *Waldsterben* constitutes a central paradigm of ecological concern in German literature. The master-metaphor of the dying forest hints at the process of decay and fulfils a vital function in generating public awareness. It re-frames the forest (because trees are actually dying, not just metaphorically) as a site of the danger of vanishing. According to Axel Goodbody, herein lies a peculiar potential of literary discourse:

[e]nvironmental journalism, essays, and of course fiction and poetry can be sites of imaginative fusion through which nature is reconceptualised, a new system of values negotiated, and a fresh ecological vision generated. Metaphors and images have the ability to engage the irrational and the unconscious through innovative links and associations. (2002, p. 40)

An example of such an imaginative re-visioning of the German forest as a dying sphere is Günter Grass's mixed-media book *Totes Holz: Ein Nachruf* (*Dead Wood: An Epitaph*, 1990). *Totes Holz* consists of a series of the author's black and white charcoal drawings, featuring picture-book style pieces of text and a short essay, *Die Wolke als Faust überm Wald* (*The Cloud as a Fist over the Forest*). Read out at a meeting of the

⁴ In his journal, Humboldt comments even more explicitly on the environmental destruction caused by the Spanish as he discusses the harmful impact of water engineering (see Wulf, 2015, p. 105).

⁵ The apocalyptic nature of stories of decay particularly shaped literary environmental discourse in the 1980s (see Böhme, 1988, p. 234; Goodbody, 1997).

Group 47 in Prague in May 1990 and later that year published in the magazine *Sprache im technischen Zeitalter* (cf. Elsner Hunt, 1992, p. 164), this nature essay angrily points to markers of decay in German forests. At one point, Grass's narrator pictures an alternative version of the Grimm Brother's fairy tale in which *Hansel and Gretel* find themselves lost in a dead forest, suggesting in a similar vein to Thoreau in *Walden* that Germany's rich romantic tradition could not exist without the German forests. In a gesture of sheer despair, he asks his readers: "Was bringt Menschen dazu, Wälder sterben zu lassen?" / "Why do humans let forests die?" (1990, p. 106. All English translations are my own)

Grass's essayistic subject, who represents the strand of a politically committed literature, demands action and tackles practices such as: "Von Lehrstühlen herab das Erhabene feiern. Oder den Dichter Handke um heilende Wörter bitten." / "Celebrating the sublime from professorial chairs. Or asking the poet Handke for healing words." (Ibid., p. 107) According to the narrator, there is no redemption in aesthetics: "Bäume, die ihre Wurzeln zeigen, machen sprachlos" / "Trees, which expose their roots, render speechless" (ibid., p. 104). Yet, Grass' own language prompts a different conclusion. The essay is saturated with terms like "Panikblüte" (panic bloom), "Angsttrieb" (sprout of fear) and "Naßkernfäule" (wet core rot), which designate disease, yet capture the dominant sense of anxiety about the environmental future by combining emotive with organic nouns. In activating their poetic quality alongside their informative value in the text, anger becomes a source of creativity. As his voice oscillates between sarcasm, hope, rage and resignation,⁶ Grass's essayistic subject presents itself as a type of seer who stands outside society in order to analyse catastrophic and abusive nature encounters (see Mayer, 1988). The ethical stance he takes is inspired by physiocentrism. Human survival, according to Grass, does not depend on forests:

Es heißt: Mit den Wäldern sterben die Menschen aus. Ich glaube das nicht. Die sind zäher und können mehr einstecken, als sie sich zufügen.

They say: Humans die with the forests. I don't believe this. They are more tenacious and capable of swallowing more than they bring about themselves. (1990, p. 108)

The survival of our species, as Grass's narrator sees it, does not depend on the existence of forests. Grass goes beyond anthropocentrism's conviction that the nonhuman world has to be protected as an essential resource. And yet he still vehemently op-

⁶ Irmgard Elsner Hunt encapsulates these alternations in voice in the concept of an "Ästhetik des Schwebens", floating aesthetics (see 1992, p. 164).

poses destruction, thereby adopting a physiocentric position. While he generally focusses on German forest territories, as he demands that his readers act as fully involved political individuals, he also aligns the decay of the forest with other eco-apocalyptic scenarios of the 1980s: Chernobyl, the Cold War, acid rain, and dying seals. This shift in perspective from national to supranational phenomena enhances the urgency of Grass's concerns. He performs decay in writing by establishing a synthesis between the particular and the universal, lifting environmental concerns to a terrifying global level. This shift represents a typical essayistic move, which is also characteristic of other German-language essayists.

Ernst Jünger, for instance, records dynamics of forest decay in different regions around the globe. He observes that there "are hardly any remains of primeval forests on Java, and it's going to be similar in Malacca soon." (1980, p. 265) He notes similar developments in southern Europe. His essay *Der Moosgrüne* (*The Moss-Green*), included in *Subtile Jagden*, presents rural Sardinia as an anachronistic place in which an old harmony – a land ethic – is still intact. This sphere, however, is under constant threat. There are, on the one hand, forest clearances by continental charcoal burners that have changed the aspect of the landscape:

Diese 'Kontinentalen' kommen alljährlich hierher, um Holzkohle zu brennen; durch ihre Tätigkeit dürften im Lauf der Jahrhunderte die Wälder im weiten Umkreis verschwunden sein, [...].

These 'continentals' come here every year, in order to burn charcoal; their activities over the last centuries may have caused the vanishing of forests for miles around, [...] (ibid., p. 200).

On the other hand, the arid island is at risk of being spoiled by large hotel chains that use up vast amounts of water resources and will change the old social structure for good (cf. ibid., pp. 195-196). Jünger's narrator argues against such exploitative and modernizing developments. He points to their risks, by grounding his argument in warnings of a future decay that entails both a cultural and a natural decline, as he sets conservation against ruthless exploitation. Jünger's shifts between different local and global contexts bring to mind the interconnected form of Humboldt's writing. By noting patterns of decay in different localities the writing asserts an overarching trajectory of decline.

Vanishing forests are also the main concern of Peter Handke's *Epopöe vom Verschwinden der Wege oder Eine andere Lehre der Sainte-Victoire* (*Epopoe of the Disappearing Paths or Another Lesson of Mont Sainte-Victoire*, 1995). This short essay marks Handke's return to a site he has already explored in his better-known essay *Die*

Lehre der Sainte-Victoire, which blends landscape descriptions with contemplations of Paul Cézanne's paintings of the mountain. *Epopée* is a type of sequel to the earlier essay. It describes another walk through the area at the foot of Mont Sainte-Victoire in southern France. In early January 1990, the third person narrator returns to the paths "die ihm jedesmal neu als Himmelsleitern gedient hatten" (Handke, 1995, p. 105) / "that had proven to bring him inspiration many times." (Handke, 1998, p. 83) This time, however, the essayistic subject no longer recognizes the region. A dreadful forest fire has left the vegetation radically changed. Handke's narrator wanders through this landscape as through a post-apocalyptic wasteland:

nach jeder kleinen Reihe von Bäumen, die unversehrt schienen, kam ein umso weiter gestrecktes, schwarzes und graues, Kohle- und Aschenland. (1995, p. 106)

Each small row of trees that appeared unharmed was followed by a larger strip of a black and gray landscape of coal and ashes. (1998, p. 84)

The timespan of fifteen years that lies between the two essays allows Handke to showcase an evolution of decay. Familiar paths have been wiped out by the firestorm and all that remains of this burnt out ecosystem is an uncanny silence. A spiritual void, caused by the absence of birds, hangs menacingly over this landscape where Handke's narrator had longed to retrieve a sense of inner direction. Instead, he evokes a state of confusion, by describing the outer wasteland:

da selbst die letzte Dornstrauchwurzel verkohlt war, hätte man in dem unermesslichen Gelände, wo früher das Unterholz den Weg vorschrieb, jetzt auch ohne Weg überall gehen können, kreuz und quer, in alle Richtungen. (1995, pp. 108-109)

because even the last bramblebush [sic] was burnt to the roots, one could now walk anywhere, in any direction, through the vast tract of land where the undergrowth had once marked the way. (1998, p. 87)

By contrasting memories of the flourishing forestland he depicted in his earlier essay with the current state of devastation – he speaks of a "Brandland" (1995, p. 109) / "burnt landscape" (1998, p. 87) – and through other motifs of doom and decay, Handke conveys the dreadfulness of devastation. And yet, the barren landscape is not without appeal to him. His narrator continues his walk, "ohne seinen Willen, wie hypnotisiert, von der bis auf Stumpf und Stiel ruinierten Natur" (1995, p. 109) / "against his will and as if hypnotized by nature-destroyed root and branch" (1998, pp. 87-88). Landscape is presented as an active force, here, that has a firm grip on the essayistic subject. The dense language of the essay, at least to a degree, celebrates the bleakness and the apocalyptic rage of fire in all its sensory dimensions. Resonating with military-imagery, Handke's essay imagines the noisy "gigantische Batterie an

Schrapnellen" (1995, p. 109) / "gigantic battery of shrapnel" (1998, p. 88) that was ignited by the heat of the fire. Before that, the narrator hints at the "rhythmische[n] Muster" (1995, p. 109) / "rhythmic pattern" (1998, p. 88) of bits of stone that have been "punktweise abgesplittert" (1995, p. 109) / "chipped off" (1998, p. 88), converting audible imagery, gradually, into the sphere of vision. With the help of colour adjectives – such as "hellroten Mergel" (1995, p. 109) / "light red marl" (1998, p. 88), "zwischen Dunkelgrau und fast Weiß" (1995, p. 109) / "dark gray and off-white" (1998, p. 88) – he captures the visual aspects of the ground.

Handke's focus on the ability of language to redeem the aspect of this exhausted landscape would repel a more engaged writer like Günter Grass. One could, however, turn this argument around and conclude that Handke even finds the aesthetic value of anthropocentric ecological ethics in a dead landscape, a landscape that is otherwise not deemed to be beautiful. For committed writers it remains problematic that his essay draws no immediate ethical conclusions from these aspects of devastation. Although Handke's essay refers to an actual event – in 1989, a forest fire broke out on the southern side of the mountain, ravaging 5000 hectares of the landscape – he mentions at no point who or what has caused the fire. Whereas Grass and Jünger list a variety of reasons for dying forests including forest clearances and chemical pollution, Handke evokes the dead landscape as a bleak visual spectacle. Pursuing an aesthetic engagement with landscape that gives priority to shapes, colours and sounds, he reassumes his earlier involvement with Paul Cézanne's paintings of Mont Sainte-Victoire, as he creates a diffuse catastrophic collage of sensory impressions, rather than developing an explicitly ethical argument.

The German writer W.G. Sebald is more specific in this regard. His nature essay *Die Alpen im Meer* (*The Alps in the Sea*) addresses an insular setting that is similar to Jünger's engagement with Sardinia in *Subtile Jagden*. In this short text, first published in the German magazine *Literaturen* in 2001, Sebald contemplates systematic deforestation on the island of Corsica. Unlike Handke, he leaves no doubt that humans are accountable for this destruction.⁷ The essay begins in the manner of a fairy-tale that presents the decay of the Corsican ecosystem in an elegiac tone: "Es war einmal eine Zeit, da war Korsika ganz von Wald überzogen." (Sebald, 2006, p. 39) / "Once upon a

⁷ Deforestation also features prominently in other works by Sebald. Chapter 7 of his essayistic novel *Die Ringe des Saturn. Eine englische Wallfahrt* (*The Rings of Saturn. An English Pilgrimage*, 1995), for instance, depicts the bare coastal landscapes of Northeast England that have been affected by earlier settlers who burnt Suffolk's plantation.

time Corsica was entirely covered by forest." (Sebald, 2005, p. 36) Sebald's essayistic subject speaker mourns the loss of a natural splendour he still finds in nature representations from ancient times:

Die dereinst bis an die dalmatinischen, iberischen und nordafrikanischen Meeresufer reichenden Hochwälder wurden größtenteils am Anfang unserer Zeitrechnung schon geschlagen. Nur im Inneren Korsikas erhielten sich einzelne, die heutigen Wälder um vieles überragende Baumgesellschaften, die noch von Reisenden im 19. Jahrhundert mit einem Ausdruck von Ehrfurcht beschrieben wurden, seither aber nahezu gänzlich erloschen sind. (2006, p. 39)

Most of the high forests that once grew all the way to the Dalmatian, Iberian and North African coasts had already been cut down by the beginning of the present era. Only in the interior of Corsica did a few forests of trees towering far taller than those of today remain, and they were still being described with awe by nineteenth-century travellers, although now they have almost entirely disappeared. (2005, p. 36)

Sebald's narrator exhibits the continuing dynamics of decay in two steps. By tracing back deforestation through the nineteenth century to the "beginning of the present era", he establishes a timeline for it. His narrator finds the roots of destruction and exploitation in a devastating human condition, an urge to exploit the natural world that has since not stopped. Over the course of the essay we find Sebald's narrator exploring the island as he observes further signs of relentless decay. He describes the all-encompassing consequences of human intervention and mentions the harmful impact of Corsican hunters on the island's game population, which has been "nahezu restlos ausgerottet" (2006, p. 43) / "eradicated almost without a trace" (2005, p. 40). While Sebald presents the earlier, flourishing version of Corsica as a "Paradiesgarten" (2006, p. 43) / "paradise garden" (2005, p. 40), the essay emphasizes the extent of the evolution of decay, by culminating in a doomsday scenario. We find the narrator looking out of his hotel window at the end of the essay as he watches the sunset ignite an apocalyptic spectacle:

Die im Verlauf von Jahrmillionen von Wind, Salznebel und Regen aus dem Granit geschliffenen, dreihundert Meter aus der Tiefe emporragenden monströsen Felsformationen der Calanches leuchteten in feurigem Kupferrot, als stünde das Gestein selber in Flammen und glühe aus seinem Inneren heraus. Manchmal glaubte ich in dem Geflacker die Umrisse brennender Pflanzen und Tiere zu erkennen [...] (2006, p. 49).

The monstrous rock formations of Les Calanques, carved from granite over millions of years by wind, salt mist and rain, and towering up 300 metres from the depths, shone in fiery copper red as if the stone itself were in flames, glowing from within. Sometimes I thought I saw the outlines of plants and animals burning in that flickering light [...] (2005, p. 47).

This description superimposes empirical information about the rock formation with the narrator's apocalyptic imagination. We see the actual Corsican landscape filtered

through his perception. In his vision of decay, extinct plants and animals burn as if in a purgatorial fire that reflects human guilt, echoing the biblical punishment paradigm Kate Rigby explores in her study (see 2015, p. 3). The victims of man-made devastation, in the end, appear to look back at their tormentors. The religious underpinning of this scene complements the Edenic images of earlier times and establishes a dichotomy in which the process of decay unfolds to full extent.

But what is the ethical function of stories of decay? While tales and images of a doomed world have the ability to alert readers – Murphy points out that “cautionary tales have played a significant role in various ethical campaigns, such as the antinuclear movement” (2011, p. 164) – they do not necessarily provide us with deeper ethical insights. Instead of providing a profound analysis of the causes of environmental destruction, dynamics of decay feed into a greater Apocalypse template.⁸ The result, more often than not, is a catastrophic mashup. If there is an ethical impetus in aesthetics of decay, it lies in its prognostic orientation. Benjamin Bühler (see 2013, p. 60) defines prognostics as a central element of ecological discourse, manifesting itself in speech acts of warning, threatening, or asking people to change their individual and collective patterns of behaviour. By continually pointing to decadence, nature essayists sketch an eco-apocalyptic future, implying the need for a revised ethical framework. Apocalyptic stories profit from their never-ending forwardness, as Frank Kermode observes:

The great majority of interpretations of Apocalypse assume that the End is pretty near. Consequently the historical allegory is always having to be revised; time discredits it. And this is important. Apocalypse can be disconfirmed without being discredited. This is part of its extraordinary resilience. (1968, p. 8)

Nevertheless, sometimes stories of decay overstress ecological dangers by evoking images of universal horror, instead of revealing actual causes and consequences. Greg Garrard notes that apocalypticism both “responds to and produces ‘crisis’” (2012, p. 94), as it frames the state of the world, or at least parts of it, in terms of a nearing end. This happens on two levels. On the one hand writers expose single species that are threatened by extinction or have already vanished. Sebald does this when he mentions the “tyrrhenischen Rothirsch *Cervus elaphus corsicanus*” (2006, p. 43. Sebald’s emphasis) / “Tyrrenian red deer *Cervus elaphus corsicanus*,” (2005, p. 43) an animal he describes as being “inzwischen längst ausgestorben” (2006, p. 43) / “now long since

⁸ I use the term ‘Apocalypse’ in the popular sense of the approach of a doomsday or the catastrophic end of history, and not in the original biblical sense according to which it refers to the process of ‘revelation’ (see Collins, 2014).

extinct" (2005, p. 40). On the other hand essayists outline a more universal dynamic of decay. They allude to the risk of a doomsday. J.A. Baker brings these two levels together in *The Peregrine* when he alerts his readers to the fact that "[f]ew peregrines are left, there will be fewer, they may not survive" (2011, p. 31), and concludes shortly thereafter: "It is a dying world, like Mars, but glowing still" (ibid., p. 32). Baker refers to a specific, empirical situation of decay: the actual observation that, due to the use of agrochemicals, raptor populations in England during the 1960s were in decline; but he expands this situation by reshaping it through the Apocalyptic template and in doing so overrides the facts.

Baker's contemplation, in keeping with essayistic aesthetics, alternates between a bioregional phenomenon (the danger of extinction) and a more universal story pattern (a doomed planet). Grass, Handke, Jünger, and Sebald all make use of similar changes in levels. Each of them shifts focus between observations of specific regional occasions of decay and greater forces of destruction, fostered through apocalyptic imagery. In the context of stories of decay, the essay's tendency to universalise creates an ethical urgency by envisioning singular events as part of a planetary tendency that affects more than just regional ecosystems. By incorporating individual instances of decay or extinction into a broader panorama of collapse, essayistic subjects speak as warners. They alert us to a risky new direction in which the world steers. The prospective ending that Baker's narrator evokes – in a similar manner to Grass with respect to the German forests, Jünger in Sardinia and the Indian Ocean, and Sebald on the island of Corsica – may or may not happen, but it is asserted in writing. Such warnings of the end of the world feature as expressions of a real ecological risk and also give us a flavour of the destructiveness of human agents.

While stories of decay tend with rare exceptions to be deeply pessimistic, it is noteworthy to acknowledge that they have a counterpart in narratives of resilience and resurgence which stress the potential for renewal and recovery after phases of decline. Dynamics of recovery promise to spread a new hope of renovation. After phases of decay, there is always the possibility for ecological life to re-emerge. In a plenary presentation at the eleventh biennial conference of the Association for the Study of Literature and Environment, Donna Haraway and Anna Tsing (2015) have described this ecological dynamic in terms of what they call "resurgence". They define resurgence as a rapid ecological change that follows in response to a moment of disturbance. Instead of vanishing, animals and plants re-emerge in different localities

and shapes where they make a new contribution to the ecosystem. Before-after templates, accordingly can also illustrate processes of regeneration. Thoreau, for instance, not only warns his readers in *Walden* of deforestation: he also points to nature's power to renew itself when he mentions that at the site where "a forest was cut down last winter another is springing up by its shore as lustily as ever" (2008, p. 174). This vision of the ecosystem as an imperishable organism establishes an alternative nature framing. Thoreau presents plants and animals as resilient organisms that, even if humans try to harm them, have the ability to re-emerge. By shifting focus towards the plants' agency, Thoreau makes sure that we see their independence. The world of plants is intertwined with our reality, but it also exists apart from us.

Decentred Perspectives: Writing Entangled Agencies

There are many nature essays that represent the agency of the essayistic subject as being embedded in a dynamic environment where different material forces interact, revealing "entangled agencies" (Barad, 2007, p. 33). Chapter 3 on metaphysical-spiritual epistemologies, in particular, has demonstrated how nature essayists stage the process through which the natural world suddenly unfolds itself dramatically and in so doing diminishes the essayistic subject. The sublime and the epiphany, in particular, feast on the collapse of the conceptual distance between environment and subject. While sublime nature experiences, in the age of Humboldt, were still working as a paradigm in which the human mind underwent a process of self-assurance because in the end it could always rely on the firm order of the enlightened European value system, at least since the turn of the twentieth century such beliefs in a fixed moral framework have broken down. With this shift, the sublime can change its function and serve as a tool that allows the essayist to perform what I propose to call a decentring of perspectives. Darker experiences of the sublime are now derived from the acknowledgement that no superior human point of view is accessible. This has become obvious, in particular, in my analysis of Musil's *Das Fliegenpapier*. At first glance, the essay seems to present us with a test assembly in which vermin are meant to be erased in order to improve the environment according to human preferences. This is the human-centred perspective. But Musil's ironizing use of similes reflects the absence of any working ethical framework and serves as a rhetorical device that allows him to hint at the insect's agentic force, its resistance to being turned into a

textual animal. Drawing on images of warfare, Musil evokes the sublime depth of a nihilistic world in which no meaning can be attached to a struggling fly. The human point of view is insufficient. Instead of answering the question of how to behave ethically, the overabundance of comparisons reveals an ethical void – the new sublime. The closer Musil's narrator looks at the microcosm of insects, the less he understands.

The fact that an engagement with micro-environments can blur prior assessments of the natural world is also evident in more recent nature essay writing. Kathleen Jamie in her reportage-style essay *Pathologies*, included in her 2012 collection *Sightlines* and earlier published in *Granta's* 2008 *The New Nature Writing* issue, adopts an inward bound perspective. Convinced that nature is "[...] not all primroses and otters.' There's our own intimate, inner natural world" (2012, p. 24), Jamie's first-person narrator describes an encounter with a pathologist. Using a microscope, he guides her through the magnified vistas of the lining of a human stomach:

Frank wanted to show me something in one of these valleys [...]. What vistas I'd seen. River deltas and marshes, peninsulas and atolls. The unseen landscapes within. [...] Scale up the absurdly small until it looks like landscape, then we can do business.

'There!' said Frank. 'Isn't that a pastoral scene? They're grazing!' I had it: six or seven very dark oval dots, still tiny, despite the magnification, were ranged across the blue valley, like musk oxen on tundra, seen from above. 'This is *Helicobacter pylori* – they're bacteria. [...]' (ibid., p. 34)

This passage ironically plays with nature concepts in which a self-contained human explorer inventories the beauty of an external landscape. Although making use of the inventorying description techniques of traditional nature writing, the narrator undermines classical pastoral structures by relocating them inside the human body. In the pathology lab, the present stomach lining is examined for inner infections and cancer. Jamie's emphasis on pastoral images, at first, seems irritating as she shifts focus from medical to aesthetic discourse. The switch in scales ignites an ironic mode, yet it also provides consolation in a larger world that in many parts has already been destroyed. Imagination and description techniques make it possible to keep the pastoral alive in a micro-environment. In doing so, Jamie's narrator rescales and re-centres the pastoral. Humans are not the centre of the environment; they are, in fact, an environment of their own, populated by smaller organisms like bacteria that can have power over life or death.

New materialists have adopted Jakob von Uexküll's concept of 'Umwelt'. They interpret any mesh of entangled agencies, such as those described by Kathleen Jamie

and Joyce Carol Oates, as textures of overlapping communication patterns. One key strand of biosemiotic thinking purports that all life forms are capable of responding to their environments in nondeterministic ways. They communicate by exchanging information. Wendy Wheeler explains that "biological information must be properly understood as biosemiosis – that is the action of signs, and communication and interpretation in *all* living things – all the way from the single cell to complex multicellular organisms." (2014, p. 122) Human language, accordingly, is not the sole tool of communication: plants and animals communicate just as well. Quoting Jesper Hoffmeyer, a biosemiotician, Wheeler notes that these "organic processes cannot be reduced simply to physics and chemistry because an 'epistemic cut' exists between any phenomenon and its observer (or measurer)." (Ibid., p. 125) 'Epistemic cut' in this context refers to the semiotic distinction between the interpreter and the object of interpretation. Nature is a place of semiotic processes even if these are not legible to humans.

Essays have the ability to imagine other communicative systems, by decentring the human point of view as they alter time-scales and focus on different systems of registering spatial dimensions. Although an alternative point of view always inevitably originates in the human imagination, essays can open up spaces in which the perception of the essayistic speaker is counterbalanced by non-human subjectivities. J.A. Baker, for instance, illustrates the cognitive abilities of peregrine falcons as he states that raptors register different patterns in their environment: "the neat squares of orchard and woodland, the endlessly varying quadrilateral shapes of fields. He finds his way across the land by a succession of remembered symmetries." (Baker, 2011, pp. 45-46)⁹ By imagining the raptor's way of seeing, *The Peregrine* reminds us of the bird's alterity, while also paying respect to its different ways of inhabiting its life world. By changing focus from the first person essayistic point of view to the animals' mode of registering its environment, Baker subverts the primacy of human perception. He demonstrates how different lifeworlds overlap when species meet. Even without expressing ethical concerns for other life forms, the shift in focus contributes to a physiocentric ethical framework, in that it underscores the fact that humans depend on various material systems in which they are entangled through their bodies (see Alaimo, 2010, p. 17).

⁹ In order to capture this elevated point of view correctly, J.A. Baker studied photographs of south-east England, taken by the RAF and the Luftwaffe (cf. Macfarlane, 2015a, p. 154).

When different life worlds and with them different semiotic systems overlap, there are naturally clashes and confusions. In the worst case, bacteria or cells may disturb other semiotic processes that run in the human body, as Jamie's narrator observes. By turning the gaze inwards, essays can reveal the agentic power of human and nonhuman micro-organisms. In her 1988 essay *Against Nature*, the American writer Joyce Carol Oates breaks with the genre convention of outward bound nature exploration and re-assesses the human body as a part and parcel of the environment. Oates's understanding that concepts of "Nature" as a single coherent noun" (1988, p. 70) prevent us from seeing our true role as a portion of the greater global environment results in a shift in perspective. Following a critical assessment of the tradition of nature writing, Oates declares:

My body, which 'I' inhabit, is inhabited as well by other creatures, unknown to me, imperceptible – the smallest of them mere sparks of light. My body, which I perceive as substance, is in fact an organization of infinitely complex, overlapping, imbricated structures, radiant light their manifestation, the 'body' a tall column of light and blood heat, a temporary agreement among atoms, like a high-rise building with numberless rooms, corridors, corners, elevator shafts, windows... In this fantastical structure the 'I' is deluded as to its sovereignty, let alone its autonomy in the (outside) world [...] (ibid., pp. 74-75).

Through a framework of architectural metaphors Oates's narrator presents the human body as a complex ecosystem. By traversing its surface, she imagines the human interiors as a confusing building in which different agencies interact and the voice of the human self, the "I", is only one "creature" among many. Yet, this vision of egalitarian coexistence is linked to a loss of autonomy. The essayistic subject struggles to perform the role of the Montaignean director of the text. Oates demonstrates how a change in scale can query the first-person narration as it helps to level different forces. The close-ups of microscopic perspectives degrade the role of human agents.

This affects our assessment of the essay as a form. It implicates a critique of the genre convention of speaking mainly about personal experiences with the essayistic subject speaker as the nucleus of ethical considerations. The essay genre's focus on the human self sits somehow uneasily with the need to shift focus towards the environment. This asks the question whether the physiocentric orientation of some essays can challenge the genre tradition of elevating the human point of view, as seems to be the case in Joyce Carol Oates's vision. Is it possible that the essayistic subject disappears when the text turns fully towards the ecosystem? We have seen nature essays in which the narrator was almost absent, somehow vanishing into the natural world – think for instance of Eliot Weinberger's *Naked Mole-Rats* or *Das*

Fliegenpapier – and we have seen essays in which the human narrator appeared as a character and voice that was continually present (e.g. in the essays by Andreas Maier and Christine Büchner, Andreas Martin Widmann, Kathleen Jamie, David Foster Wallace, and Henry David Thoreau). The essayistic subject speaker, in both cases, acts as a framing device, a lens through which 'nature' as a theme is perceived and interpreted, but it is by no means the text's only agent and its stance in the world is anything but self-evident. By adopting decentred perspectives, nature essays negotiate the relationship "between observing and being observed, between humans and inanimate matter, between writing and content, in the process formulating an ethics of respect toward the world and its inhabitants." (Duszat, 2014, p. 281) But while it can seem that essays turn against the primacy of human needs because their narrators immerse themselves into the natural world, a different way of looking at this shift emerges when we see the undermining of the essayistic subject as a writing technique. In Jamie's and Oates's essays the heroic point of view, often associated with the Romantic self, has become circular. Instead of celebrating subjectivity, they expose a human self that contemplates a human being close-up. This brings the essayistic subject back into frame. While the essay stages a loss of control, in doing so it gains back power to engage in ethical discourse.

Conclusion:

Paradigm Shifts in the Nature Essay

The starting point of this study was the desire to explore nature writing's essayistic strand, in order to re-evaluate a genre that had recently had to face criticism for being allegedly "self-indulgent" (Westling, 2014, p. 6) and naively mimetic. Even writers like Joyce Carol Oates have argued that nature "inspires a painfully limited set of responses in 'nature writers' – REVERENCE, AWE, PIETY, MYSTICAL ONE-NESS" (1988, p. 67. Oates's own capitals). And yet the fact that Oates's article *Against Nature* meets many essential criteria of the nature essay – combining empirical nature descriptions and reflections on nature-culture dichotomies in a discontinuous collage-style that is delivered with a subjective underpinning – speaks for the enduring usefulness of this type of text. In writing, Oates investigates the complexities of human involvement with the surrounding world and takes her readers along with her. Nature essays often do this. They tend to be less forbidding than academic types of writing, learning things with us, performing them in writing. Over the course of the present study, we have followed Rousseau's essayistic subject onto a rocking boat in Switzerland, where he contemplated the botanical and political world around him. Humboldt led us through South American landscapes to prove the far-reaching continuities of the rich web of life that covers the whole planet. Sarmiento expressed his appreciation of the intense spirit of the Argentinian Pampas, while discussing possibilities for converting it into a more cultivated space. Thoreau re-enacted in writing his experiment in living in closer harmony with nature's cycles, seeking to inspire us to try out alternative ways of life. Musil, Woolf, and Jünger depicted individual instances of contact with different insect species, shifting the focus from the broader landscape panoramas of earlier nature essay writing to microscopic close-ups, as they engaged with discourses of pestiferousness. Aldo Leopold's land ethic

continued a line of thought that had already been laid out in Humboldt's essays, as he reflected on the conditions most beneficial to the flourishing of all life, not just human. Baker, Jamie and Maier/Büchner respectively took us on bird-watching tours, each of them discussing the risks of extinction and the value of nature as a counter-sphere that could be asserted in writing. Grass, Handke, and Sebald evoked the beauty of forests and discussed their vanishing due to deforestation. Wallace took us along to the Maine Lobster Festival and used this occasion to reflect on the ethical implications of eating animals. Weinberger guided us through the curious habitat of naked mole-rats. And Widmann explored urban nature, using Google Street View, as he contemplated a man-made digital environment.

I briefly revisit these examples for the way in which they echo the overarching concern of this study: the synergies between contemplation and description, imagination and empiricism, artefact and experience. To circumscribe such a broad territory, I have plotted a trajectory that was not chronological, but epistemological, and illustrative rather than exhaustive. It started with examples of typical aesthetic strategies in scientific-encyclopaedic nature writing, led to spiritual-metaphysical perspectives and ended with a shorter analysis of ethical writing. In the process of tracing nature essay writing through this wide range of detailed readings, I found that the discursive interplay between distinct types of framing crystallized as a constant process of amalgamation. In keeping with the essay genre's traditional penchant for unruliness,¹ essayists have tended to reject the disciplinary boundaries of specialized fields, adopting a more holistic approach to writing that included poetry, history, and politics alongside hard facts. In this way, nature essays brought different epistemic constellations into contact and continually forged new forms of knowledge.

It is part of the genre's self-reflexive outline and proof that in the nature essay lies indeed a "nonsubstantialist countertradition" (Morton, 2007, p. 16) that responds to less self-conscious forms of writing that essays regularly comment on their own underlying assumptions about how to approach the natural world. Alexander von Humboldt was the first essayist I discussed to stress the fact that it does not suffice to describe the laws of nature. In order to capture its essence, the natural world also has to be depicted in the way it resonates with the human subject. In the preface to *Ansichten der Natur* Humboldt describes his method as an "ästhetische Behandlung naturhistorischer Gegenstände" (2004, p. 7) / "aesthetic treatment of matters of natu-

¹ Adorno states: "the law of the innermost form of the essay is heresy" (1991, p. 23).

ral history” (2014, p. 25). This poetological maxim reverberates through most nature essays. Ernst Jünger, for instance, in *Subtile Jagden* seeks to continue “das liebevolle Betrachten von Objekten, [das] [...] kaum noch als Wissenschaft [galt]“ / “the affectionate observation of objects [that] did no longer count as science” (1980, p. 11); and Maier and Büchner more recently speak of the “Mischung aus Denken und Fühlen” / “mixture of thinking and feeling” (2008, p. 27) that guides their mode of nature depiction in *Bullau*. Through brief self-reflexive comments, nature essays simultaneously critique the tightly fenced discourses of modern science for their shortcomings in providing broader patterns of meaning, while presenting an alternative that comes into being in the literary mode. Essays connect different bits of information about local and global environments; they discuss the responsibilities of the human species and describe personal experiences as examples of wider concerns. Thoreau’s writing is paradigmatic in this respect. In *Walden*, Thoreau’s narrator seeks the spiritual-transcendental experience of dipping into the pond. He further celebrates the pond’s beauty and its function as a habitat for multiple species. He measures and maps the pond as a land surveyor. And he critically reflects on a group of workers every one of whom cuts the ice and “unroofs the house of fishes, and carts off their very element and air” (2008, p. 262) in order to turn Walden’s water to profit. These different ways of looking at the microcosm of the pond are constructed through a variety of styles. *Walden* features the numeric discourse of measurements; it includes geographical lexemes, botanical and zoological taxonomies, descriptions, passages of reasoning, and lyrical evocations of emotions. These stylistic discontinuities function as catalysts for epistemological transgressions.

At the dawn of the nineteenth century transdisciplinary methodology was already drawing to a close, but early nature essayists like Rousseau, Humboldt, and Thoreau in their day were still considered scientists. Modern and contemporary nature essayists, in contrast, operate more clearly within a literary discourse. Ernst Jünger, Eliot Weinberger, David Foster Wallace, Kathleen Jamie, Andreas Maier and Christine Büchner, for instance, have re-visited the natural history tradition of classifying plants and providing zoological taxonomies. Their writing continues to feature scientific nomenclatures, measurements, and other data, but they do not lay claim to the advancement of science, as they are primarily interested in the aesthetic process implied in the act of naming, describing, and listing species. While nature essays have always been committed to providing accurate information about the

environment, information that corresponds to scientific knowledge, they have also made an effort to turn this information into literature and in doing so elevate it to a poetic kind of meaning. We have witnessed this interest in the aesthetic qualities of encyclopaedic forms of knowledge, for instance, in Weinberger's *Naked Mole-Rats*. Weinberger re-introduces a sense of wonder into bland lexical information patterns, as he organizes encyclopaedic facts he derives from a zoological source about naked mole-rats through minor syntactic alterations and semantic changes in rhythmically styled prose. While a sense of the scientific pervades Weinberger's prose, he insists on the legitimacy of literary discourse, never subordinating it to science. His essay both informs us about the behaviour of naked mole-rats and grants these subterranean rodents their alterity by adopting a language that exhibits their ultimate strangeness. By describing the pale pink aspect of their skins, their blindness and their sleep he also describes them as foetal creatures. Through the device of juxtaposition, Weinberger compares them to ancient human cultures, and ultimately hints at the speaker's own longing for a pre-conscious state of mind with a strong redemptive quality. This longing for oneness, salvation and spiritual meaning has informed all the types of essays I have discussed, ranging from Sarmiento's celebration of the spirit of the Pampas, via J.A. Baker's pursuit of the elevated state of being of *The Peregrine* to Andreas Martin Widmann's mock-Dantean quest for a meaningful existence in the artificial environments of Google's digital representation of urban nature in *Mind Gardens*. By combining spiritual longing with empirical information, nature essays embed subjective meanings in a broader panorama; or, to put it with Scott Slovic: a personal take on nature "couple[s] our scientific knowledge with sensory and emotional experience" (1992, p. 155). In so doing, essays help us better understand the emotional significance of the non-human world. They reveal the possibility of a transdiscursive type of literary knowledge that originates in the discourse of the subject speaker but reaches beyond it.

Contrary to Dana Phillips' belief that nature writing's focus on the perception of the self undermines its epistemic potential, I have argued that the essay genre's ability to establish a "spontaneous synthesis between the particular and the general" (Zima, 2010, p. 69) allows the writer to transcend the personal idiosyncrasies of localised nature experiences without losing sight of how they matter as acts attaching value to the natural world. Reading essays from a time period that stretches over more than two hundred years, we have seen how these meanings change as the environment

itself is exposed to increasingly radical human exploitation. While Humboldt still described the rich South American flora and fauna as an Edenic counter-world to familiar European vegetation, for the twentieth- and twenty-first-century nature essayist the experience of the secondary becomes decisive. Much of twenty-first-century nature essay writing has been determined by this movement towards a rediscovery of allegedly known nature. Jason Cowley describes the so-called ‘New British Nature Writing’ – and this surely applies to nature essays in other languages too – as being “about the discovery of exoticism in the familiar, the extraordinary in the ordinary. They are about new ways of seeing.” (2008, p. 11) Whereas nineteenth-century essayists still stressed the fact that they were the first to measure and map vast territories, contemporaries give us the sense that an endpoint of this encyclopaedic impulse of outward bound exploration has been reached. In an age in which the planet, with a few exceptions has been mapped almost completely, mole-rats suddenly turn into a fascinating subject because they inhabit a strange subterranean world, a world that has not yet been exhaustively explored. The oppressive totality of the Anthropocene is then evoked in Widmann’s *Mind Gardens*. Viewing urban nature through collages of Google Street View’s virtual images, his narrator engages with a digital representation of nature that also self-reflexively points to the essay’s hybrid nature representation. The essayistic subject notes climatic discrepancies: there are sudden changes of the season or the weather even within the same square in London. While these faults reveal a man-made environment under construction, they also remind us of the omnipresence of humans, whose impact has considerably altered the climate. Widmann’s essay alludes to the experience of nature in the Anthropocene in describing a digital environment that has been entirely created by humans.

Environments steeped in traces of the human presence demand new responses from writers. Some send their essayistic subjects into urban spheres, where they rediscover traces of an independent natural agency (e.g. *Findings*); others use inversions of narrative perspectives (e.g. *Walden*; *Subtile Jagden*; *The Peregrine*; *Consider the Lobster*) and writers like Musil critique discourses of pestiferousness that foster the human engineering of the environment by using an overabundance of metaphors that generates a peculiar irony. This way the process of framing insects is questioned. Other contemporary essayists turn their gaze inwards as they explore the micro-environments within the human body, staging the resistance of a non-human world that evades human control (e.g. *Findings*; *Against Nature*). The counter-sphere quality of

nature needs to be asserted in writing because, unlike in Rousseau's day, according to Anthropocene thinking, there is no longer any sphere untouched by human culture. Essayists, nonetheless, continue to frame the natural world as a redemptive counter-world, and to mourn their expulsion from an original state of innocence. J.A. Baker, for instance, wrote *The Peregrine* in the 1960s when England was already a highly urbanised country. Yet, he occludes most traces of civilization from the world he constructs in his writing. By clearing away the signs of human existence he asserts a liberating counter-world in writing, much like Thoreau in *Walden*. Humans enter Baker's text only when he shifts the mode from celebrating the spiritual purity of a peregrine's life to the ethical mode of addressing the devastating effects of man-made pollution. Baker delivers his warning of extinction with an apocalyptic underpinning, as he establishes a synthesis between particular observations of suffering or dying raptors and the assertion of a general ecological crisis that peaks in the vision of "a dying world" (2011, p. 32).

The ecological expressiveness of nature essays is, as Baker's example underscores, strongest in doomsday images. Although cautionary comments on the harmful impact of the human presence on the environment can already be detected in the very first nature essays I discuss, explicitly ethical reflections have started to occupy greater parts of the text as the surrounding circumstances of textual production have changed. Humboldt and Thoreau had already observed the fact that man-made alterations to an ecosystem would inevitably affect other spheres. This ecological awareness formed part of a very modern understanding of nature as systems of interdependencies and connections. And still, these writers could only guess the full impact of human action. By the mid-twentieth century, many nature essays contributed to the discourse of ecological crisis with explicit warnings, stories of decay and discussions of more eco-friendly alternative modes of living. The essay's ability to store information in this context acquires a new function. Writers like Sebald, Baker and Jünger use the text as a device to hint at species in danger of extinction. Jünger's narrator mentions types of bugs he no longer encounters on his entomological walks, in order to demonstrate the harmful impact of insecticides. Ethical framings convert encyclopaedic enumerations – used by Rousseau and other earlier essayists as a rhetorical device for recording botanical knowledge – into the kind of red list Ursula Heise discusses as a major aesthetic feature of the discourse on

extinction in her study *Imagining Extinction: The Cultural Meanings of Endangered Species* (2016).

Apart from this shift in the use of enumeration, from revealing diversity to scarcity, nature essays have the ability to suddenly turn against harmful pre-existing notions of the environment. They can query conventions discursively by shifting the perspective on them. This happens mostly in analytical discursive passages, but also through language itself. When essayists foreground the rhetorical mechanisms that establish a norm – *Bullau*, for instance, repeatedly makes use of the phrase “as if this were natural”, while Thoreau uses rhetorical inversions – they expose the fact that practices and conventions as well as concepts of ‘nature’ that are often deemed ‘natural’ are in fact artificial and therefore subject to change. It is through nature essays and other types of (self-) critical writing that we can attain a better understanding of changing human relations with the non-human world, including the possibility of change. In this context, the essay’s ability to communicate with a ‘common’ readership proves essential. Even when not published in magazines with a wide circulation – like Rachel Carson’s *Silent Spring* (1962), which was serialised by *The New Yorker* – essays can exercise a significant influence on their readers. The essay’s brevity could be a defining feature for future developments. In times when people often read online, preferring short to long forms, the nature essay is well equipped to play a significant role in environmental discourse.

Panoramic Outlook

As textual artefacts, essays rely on the linguistic depiction of nature. In this sense the discourse of the essay is always anthropocentric from the start, because traditionally it revolves around the speaking subject that takes in the world, reflects it, and sets itself in relation to this world. Even in the most physiocentric nature essays there is, after all, always a human mind at play, registering ecological processes. Essays can perform nature’s agency through aesthetics of the sublime and the epiphanic and they can stage the vanishing of the speaking subject by effacing it from the text (e.g. *Das Fliegenpapier*; *Against Nature*; *Naked Mole-Rats*), but they cannot escape the anthropocentric a priori of language itself. The most they can do is exhibit their use of language in metalinguistic reflections – which they often do.

For future research into the nature essay, it would be worthwhile to explore the aesthetic patterns of essayistic discourse across other media. Documentaries like Werner Herzog's 3-D film *Cave of Forgotten Dreams* (2010) about the oldest human-painted cave yet discovered, and *Encounters at the End of the World* (2007) about Antarctica and its inhabitants, feature first-person voice-over comments by the director himself that continually interpret and frame the images in a subjective way characteristic of the essay genre. Another example would be *Les Glaneurs et la Glaneuse* (*The Gleaners and I*, 2000) by the French filmmaker Agnès Varda, which uses similar voice-overs, choosing however a less narrative mode than Herzog. Varda connects scenes and images of different subjects related to gleaning, such as art work made of recycled materials, in a free, associative style.

A fragmented collage-style is also central to essay films like Godfrey Reggio's *Koyaanisqatsi* (1982) and Chris Marker's *Junkopia* (1981). Taking its title from the Hopi's word for "unbalanced life", *Koyaanisqatsi* in a similar vein incorporates heterogeneous landscape and city images from various sources and contexts into a patch-worked panorama of the modern environment, suggesting connections and interdependencies between different localities: overcrowded cities, sites of mining, warfare, and beautiful stretches of vast desert landscapes. When the film ends with the picture of a detonating rocket in flames, followed by three Hopi quotations that appear on the screen prior to the credits – "If we dig precious things from the land, we will invite disaster"; "[n]ear the day of Purification, there will be cobwebs spun back and forth in the sky"; "[a] container of ashes might one day be thrown from the sky, which could burn the land and boil the oceans" – Reggio in his essay film makes use of the Apocalyptic trope to expose the risks of environmental destruction, while simultaneously celebrating the visual splendour of an interconnected globe. Where Herzog and Varda use vocalised narration and interpretation, *Koyaanisqatsi* uses a soundtrack composed by Philip Glass together with sung prophecies by the Native American tribe of the Hopi to bind his images together. Chris Marker similarly samples ambient sound paintings as a sonic backdrop to *Junkopia*. Filmed at a stretch of no man's land in Emeryville's Mudflats near San Francisco, Marker's six-minute film focusses on a cluster of sculptures, made of floatable waste. Moved by the blowing wind, these strange sculptures of animals, warplanes, and tank engines gain an eerie quality. *Junkopia* juxtaposes images of the sea, sea birds and the surreal sculptures with images of a nearby highway, cars and a city in the distance. At the beginning, the

numeric longitudes of the film's location ("In latitude 37° 45' north...") appear on the screen, as is typical of a scientific-encyclopaedic take on nature. Over the course of the film, music and colours add a spiritual-metaphysical framing. This goes to show how the three epistemes of nature essay writing could be applied to other media. These films lend themselves to an essay-centred analysis in that they over-layer a rich variety of visual material from all kinds of sources with a continuous framing, while doing mostly without an overarching plot, and thus benefitting the focus on non-human life worlds.²

In addition to investigations of other media, further research into the nature essay could include projects on other cultural traditions, languages, and historical periods. While I have located the beginnings of the nature essay around 1800, it would also be worthwhile tracking the roots of nature essay writing further, reconstructing its origins before Montaigne by going back to earlier forms of subjectivised nature contemplation. This could include predecessors of the early modern period, such as Francesco Petrarch's 1336 letter about his ascent of Mont Ventoux,³ or even ancient writing like Pliny's *Historia Naturalis* – extracts from which, tellingly, feature in John D'Agata's anthology *The Lost Origins of the Essay* (2009). But no matter in which direction research into the aesthetics of the nature essay continues, it promises to have a continuing impact on the ways in which we imagine our role on an interconnected planet. By querying trained responses to nature, essays foster a new vision of the non-human world. They suddenly shift points of view or turn common phrasings upside down and in doing so broaden our cognitive horizon. If we consider the essay a textual laboratory for alternative living and thinking, through our engagement with these texts, new patterns of perception can be discovered.

² Timothy Corrigan's *The Essay Film: From Montaigne, After Marker* (2011) and David Montero's *Thinking Images: The Essay Film as a Dialogic Form in European Cinema* (2012) provide a useful starting point for future analyses into the nature essay film.

³ Petrarch's letter is often thought to mark the tipping point between medieval and early modern nature experiences (cf. Ritter, 1974). Although Petrarch depicts his ascent of Mont Ventoux as an allegory of his quest for true faith, the letter also anticipates the modern mountaineer's subjective peak experience because Petrarch first enjoys the overwhelming broad landscape panorama when reaching the top of the mountain, instead of humbly thinking of God.

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